AMERICAN GAS ASSOCIATION MONTHLY

AUGUST · 1935

Notable Changes in Dealer Relations
GEORGE JAQUET

•

Gas Plays Leading Role at Exposition
GENE ADLER

•

Gas Air Conditioning Hits Its Stride
E. D. MILENER

•

Non-Ferrous Metal Treating with Gas
R. L. MANIER

—"Not Only A Great Industry— But An Interesting One As Well"

The quotation above was made by the first student to complete the home study course on natural gas offered by the University of Kansas in cooperation with the American Gas Association. This student, William W. Mayfield, of Clarksburg, W. Va., said, "I feel that the knowledge obtained from this course is invaluable to me. It has broadened my views of the natural gas business and has shown me that the natural gas industry is not only a great industry but an interesting one as well." Other students have also attested to the great practical value and thought-stimulating qualities of the course.

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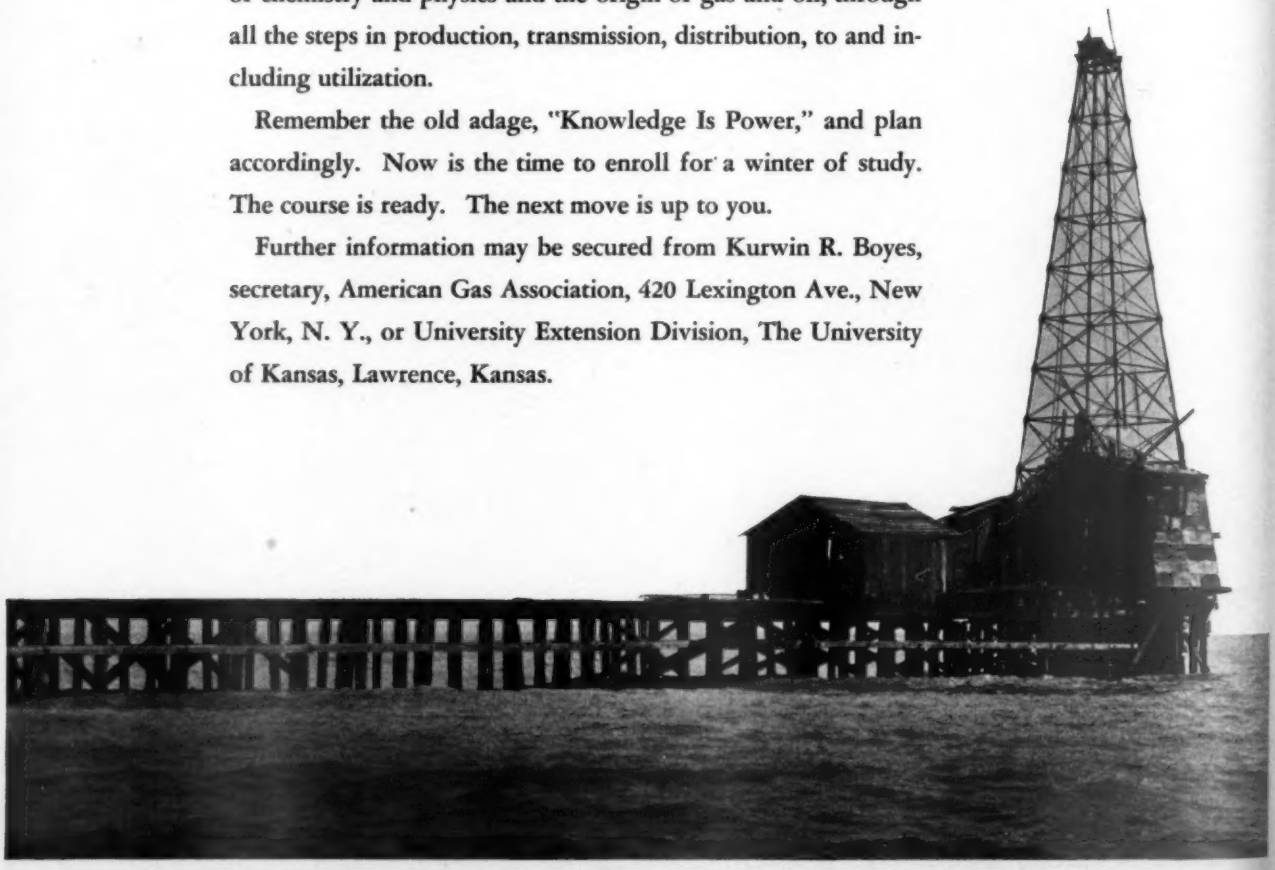
The natural gas course consists of 27 lessons, covering all phases of natural gas operation from the general consideration of chemistry and physics and the origin of gas and oil, through all the steps in production, transmission, distribution, to and including utilization.

Remember the old adage, "Knowledge Is Power," and plan accordingly. Now is the time to enroll for a winter of study. The course is ready. The next move is up to you.

Further information may be secured from Kurwin R. Boyes, secretary, American Gas Association, 420 Lexington Ave., New York, N. Y., or University Extension Division, The University of Kansas, Lawrence, Kansas.



Natural gas producing well in Lake Erie, near Port Alma, Ontario, drilled in 1931

AMERICAN GAS ASSOCIATION MONTHLY

Contents for August 1935

VOLUME XVII NUMBER 8

Notable Departures in the Field of Dealer Relations 283
GEORGE JAQUET

This Year It's The Palmer House, Chicago.... 286

Gas Plays Leading Role at Exposition..... 289
GENE ADLER

Gas Air Conditioning Hits Its Stride This Summer 292
EUGENE D. MILENER

Non-Ferrous Metal Treating with Gas..... 295
RALPH L. MANIER

Affiliated Association Activities..... 298

Cooperation Between Inside and Outside Employees 300
H. R. LIVINGSTON

N. Y.-N. E. Sales Conference Has Record Attendance 302

Home Service Aids to Sales Promotion..... 303
MARGARET NEVINS

Industrial Men Consider Commercial Gas Load at Boston Meeting..... 305

Industrial Gas Advertisements for September 307

Safety Pilot Clauses of Boiler and Furnace Requirements Revised for Immediate Application 308

Personnel Service..... 312

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Gas Flood Lighting At
St. James Park, London

AMERICAN GAS
ASSOCIATION
MONTHLY

James M. Beall, Editor

Notable Departures in the Field of Dealer Relations

By GEORGE JAQUET

**Supervisor of Customer Relations
The Connecticut Light & Power Company,
Hartford, Connecticut**

FOUR years ago, the subject of dealer relations received a good deal of attention from the industry. Many companies intensified previous efforts to foster industry good will. Methods that differed widely were selected. Then came the deep forces of change brought on by new economic and social conditions with which the industry is struggling today. Similarly painful readjustments have overtaken dealers generally. More recently, another factor is the great necessity for gas companies to speedily build load. In this maze of developments, what are some of the problems pressing for solution? I shall try to sketch a few as we see them in Connecticut.

One of the notable significant departures from the attitude of four years ago, is the emphasis on inducing dealers to sell instead of on the controversial issues which dominated the stage in the past. Conditions have changed for the better:

—For example, informed plumbers now realize that their real competitor is not the utility company; that encroachments on their market come largely from other directions;

—Gas company practices which were offensive to plumbers and other trade groups have been largely corrected;

—Marked progress has been recorded in crystallizing what constitutes sound merchandising and cooperative procedure. The New England Gas Association's Merchandising Principles, adopted by the directors January 3, 1934, are an example. The Merchandising Principles agreed to in 1932 by the utility associations and the trade organizations of Connecticut is another case in point.

Cooperative Efforts

For these reasons, and because more friendly feeling prevails, dealers and the gas industry now address their energies largely to the constructive aspect of trade relations: to selling appliances on a larger scale and creating a broader demand through the joint effort of dealers and the gas company.

To any one who is conversant with dealer cooperation as practiced throughout the industry, it is clear that a number of companies do not share the belief that stimulating outlets to sell gas is worthy of serious attention. Some commercial managers and their superiors still believe that the company's merchandising department should do the entire selling job in the community. They hold that the other outlets are of no consequence in adding appliance units to the lines, that they have no possibilities. Or, they reason that the time and money cost of stimulating outside outlets to produce sales is out of proportion to the results. For them, dealers and plumbers are something to be "put up with." Their theory is "Give them a little attention, enough to keep them satisfied." There has been some justification in the past for this attitude. Even recent experiences with individual dealers give emotional support for this attitude. Indifference by dealers to liberal offers of cooperation is frequent, and the inability of many to grasp the elements of specialty selling technique is discouraging.

Nevertheless, to generalize from such experiences that dealer sales possibilities are negligible is misleading, and may prove to be a costly fallacy at a critical juncture in the gas company's progress. Many gas companies have already discovered that in the midst of dealers who give no promise there exist individual firms which have the capacity and the disposition to move gas appliances in sizable numbers. These firms may be plumbers, or heating contractors, or department stores, or furniture dealers, or appliance specialty stores, or even automobile dealers. The talent and inclination to successfully sell gas appliances are usually personal characteristics inherent in the individual. Distributors who seek productive outlets have discovered that the person possessing these sought-for characteristics may be selling bathtubs or running a general store, or handling furniture or he may be a tradesman in still another line of business. Granted that certain lines of trade are inherently qualified by

Paper presented before N. Y.-N. E. Regional Sales Conference, New London, Conn., June 28, 1935.

their nature to sell gas equipment, it is equally true that other kinds of stores may do surprisingly well with them.

Gas company executives who face squarely the hard realities of present-day competition do not stop short of enlisting every ally who can be induced to advocate gas fuel that they can possibly muster. Their problem is not whether or not to do it. Their problem is how to get it done within reasonable bounds of time and cost.

—How can their commercial managers induce merchants with specialty selling ability to actively sell gas appliances?

—How establish gas refrigeration in these appliance outlets as an article of trade which enjoys the same standing as other types of automatic refrigeration?

—How win over department stores, furniture houses and chain stores to selling only those models of gas ranges that give real customer satisfaction and to desist from selling so-called "tin" ranges?

—How induce reliable dealers in competitive fuel equipment to devote their energies to gas burning equipment as well?

—How "keep sold on gas" the scores and scores of plumbers and journeymen who visit hundreds of homes each day when the great oil industry is bending its energies to make them oil minded?

—How "get the story" over to these men that gas water heating costs no more and is far more convenient? How enlist these men in a fighting program to hold water heating load?

—How register similar convictions regarding house heating in the minds of heating contractors?

Need for Direct Merchandising

These are angles of dealer cooperation with which executives are deeply concerned and for which they seek a practical solution. Let us be reminded that when a gas appliance dealer or a plumber ceases to recommend gas, not only a sales producing unit has dropped out but something else has happened. In most cases, he has joined the ranks of the oil industry and is one more competitor for the gas company. Most plumbers who abandon gas turn their energies to urging oil for water heating, for house heating, for commercial cooking.

At this juncture, it may be important to go on record concerning one point although already obvious to most listeners. It is the absolute need for direct merchandising activities by the gas company in order to give the appliance trade the leadership and stability which are indispensable to a sound trade situation. Or, in the absence of direct selling, to provide its equivalent in the form of the highly developed organization to spur and direct dealer sales. Continuous and aggressive sales promotion which constantly opens up new sales opportunities is taken for granted.

A. G. A. Principles Urged

Every gas company should conduct its merchandising and load building operations on the plane of fair competition. This view is the considered recommendation of the American Gas Association and of the New England Gas Association. The first and basic article of the Merchandising Principles which were adopted by the A. G. A. in October, 1931, and urged by the president upon every member company, reads:

> "The distribution of gas and electric appliances should be on the basis of fair and open competition in the interest of the consuming public, the utility, the appliance manufacturer and all merchandising outlets."

Whether a utility company should or should not operate on this basis is not open to question. It has no option and is duty bound to conduct its business on lines that will not work unfair hardships on another legitimate business enterprise. We all agree upon that, I am sure.

Practical application requires clarification particularly under present-day conditions. Gas companies must constantly fight for their business life, against the inroads of new fuels, changes in public buying habits, etc. Hence, they must be free to offer fuel and utilization devices on conditions which will maintain revenues and continued public acceptance. Such offers may cut into competitive fields; within bounds, this is fair competition. It is part of the struggle that business enterpises must constantly wage if they are to continue as going concerns.

How far a gas company may properly go in protecting its business in this sense is sometimes a matter of fine distinctions, as on those occasions within the last two years when oil burner associations protested against the resourceful methods which the gas companes in two widely separated cities employed in order to rapidly build up their house heating load. The exceptional inducements and selling pressure they used were bitterly attacked on the score of unfair competition.

The interest of the consumer is a phase of dealer-utility cooperation which can scarcely be ignored. Whatever is done should be to the mutual interest of the consumer, the dealer and the company. Gas companies are always mindful of the consumer's interest but doubly so now, if that is possible, since the entry of the government into the field of utility management and the unusual prominence given to the consumer as a distinct entity in the organized political and social life of the country. The Consumers Division of the NRA, The Consumers Research Bureau, state leagues of consumers, etc., are evidences of this trend.

Customer's Interest

When the government openly insists that even the humblest home shall be fully equipped with appliances, as federal agencies urge today, we are again reminded of the fact, not always recognized to be sure, that the consumer's interest transcends those of manufacturer, dealer and utility company. The New England Gas Association took note of the customer's interest and made it the foundation stone of its Merchandising Principles. The first article reads as follows:

> WHEREAS, it is essential to the performance of its duty that the gas utility business shall recognize that the interest of the public should govern the conduct of that business.

Developments during the last twelve months have made us all too aware of the spurs that the government has dug into our flanks: lower your residential rates; go out and put appliances into every man's home, etc. These are challenges to gas and electric men alike in the face of an impoverished consumer market. For gas

companies there is but one answer in the interest of self preservation: adopt the pattern which brings a buying response today; use the federal government's own formula:

—lowest possible selling prices for serviceable equipment;
—and term payments so low they are without precedent.

Such tactics although necessitous may arouse unrest among merchants whose normal sales opportunities are reduced by public response to the gas company's offers. Within the limitations of his own capital and facilities, the appliance merchant cannot make equally attractive offers and survive.

Gas Company's Attitude

What shall be the gas company's attitude? Shall it confine these special offers to its own sales force and let the dealer "worry on" as best he can? Or, shall the gas company enable qualified dealers to make an equally attractive offer to the public, using appliance models drawn from his line, and yielding him profit on the transaction? The gas companies in Connecticut have chosen the latter course. Early this year they reached a definite arrangement with the state organizations of master plumbers. The understanding is embodied in a permissive clause which is a part of the Merchandising Principles that the utility associations and the trade associations adopted three years ago and revised this year: This clause in essence reads:

"Recognizing that it is the duty of utility companies to supply electric and gas service at the lowest rates that are soundly possible, and recognizing that lower remunerative rates depend largely upon the greater use of service by their customers, utility companies should be permitted to employ every sound and effective means which will maintain existing use or will increase the use of service. Therefore, when circumstances require, a utility company may employ terms and conditions that are more favorable to the consumer than those set forth in Articles 4 and 7,* provided the dealer's interest is protected in accord with Article 1, with the public interest, and in the folowing respects:

a. The utility company enables dealers to participate in the offer to the public and confers with representatives of the dealers, prior to any public announcement of the offer, in order to determine the conditions of their participation;
b. The utility company offers to purchase from participating dealers contracts which they have closed with customers in conformity with the offer . . . . ;
c. The utility company enables local dealers who sell appliances of other manufacture to offer the same terms and conditions on a similar appliance which meets the requirements of Article 2 and for which there are adequate local servicing facilities . . . ."

These Connecticut companies desire to observe fair trade practice and to refrain from enjoying advantages which are not open also to dealers. Further, they value the dealer's loyalty to gas fuel and are determined to strengthen that loyalty.

When we come to the unusually low payments and the narrow margin prices that gas companies must resort to today so they may meet the government's challenge and the current ruthless competition that prevails, the question of what constitutes fair competition is again to the fore. One group of dealers, which outnumbers all others in the trade, declares such offers to be unfair trade practice. Their contention is: that dealers cannot sell at those prices, those terms, and "make a nickel"; that such offers swamp the market and deprive the dealer of his normal, day-to-day opportunity to sell at "regular" prices and terms; that equipment sales should be made as customers show interest or outworn equipment suggests replacement. They do not recognize the need of creating the desire to buy.

Standards of Fair Competition

Another group of dealers, however, look with favor upon such offers. They represent the liberal element in the trade. Under these circumstances, what is the criterion of fair competition? Should it be the standards of the great numbers of merchants who cling to the concepts of 1928 which expect the consumer to come to the buyer? Or, should the standard be the specialty methods of more alert merchants who have found the way to move goods in volume under today's conditions? If the conservative dealer's view is the test, the gas company is hobbled by obsolete standards of a bygone period. If the more progressive dealer's view is the criterion, then the gas company has a clean bill of health. It is my belief that the selling practices of the progressive merchants are the ones with which those of the gas company should be compared in any discussion of fair competition. The progressive dealer will agree in this provided you enable him to make the same offers to the public that you make, on those occasions when your offers depart from the accepted standards of regular merchandising. The fairness of this criterion will be recognized also by many conservative dealers if the gas company's contact man will make the effort to interpret the justice of it to key men in the trade who have a conservative viewpoint.

Conflicting Views

When gas company men get together and they talk about merchandising, or load building or similar topics, there is no vagueness in their minds about the meaning of these terms: each conveys the same idea to everyone. However, when they talk about "dealer utility cooperation," the term connotes something different to almost everyone present, for dealer cooperation is still in the transition stage. Since conflicting views prevail, definition of the term, "dealer utility cooperation" is in order. I shall attempt a definition; you may or may not agree with it, but I present it as my view in the light of today's knowledge and conditions. It is this:

Dealer utility cooperation is joint employment by dealer and gas company of those merchandising methods which produce the largest possible volume of appliance sales and at the same time enable progressive participants to endure, notwithstanding that the essential objectives of the dealer and of the utility company differ materially.

This definition reflects the viewpoint of the New England Gas Association. In the preamble to its Merchandising Principles we find these declarations:

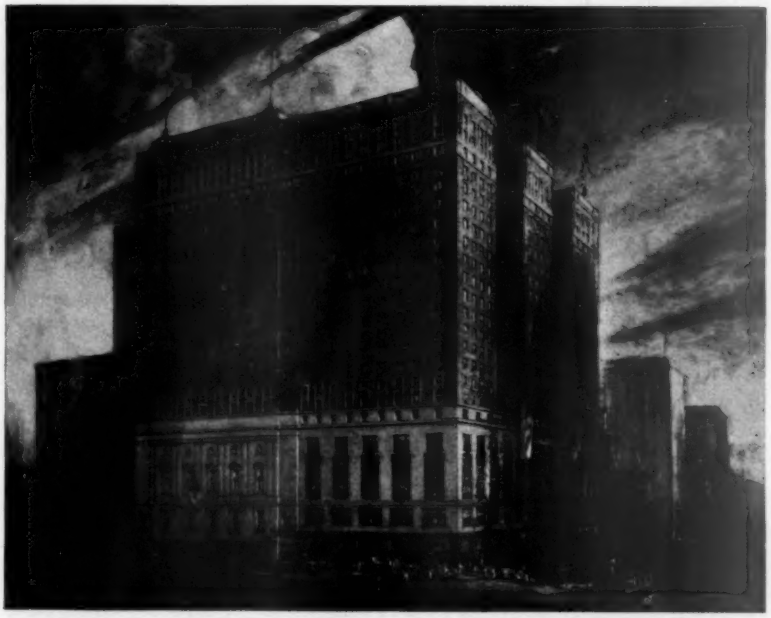
(since) "in the interest of the public, gas appliances should be distributed by dealers as well as by gas companies";
(and their) "distribution can be carried on continuously and effectively only when the agencies" (so) "engaged offer

(Continued on page 310)

* Note: Articles 4 and 7 describe merchandising procedure, recognized by the trade and the utility company as being regular and fair trade practice. They refer to mark-up premiums, trade-in allowances, and term payments.

This Year It's The Palmer House, Chicago

THE seventeenth annual convention of the American Gas Association will be held in the Palmer House, Chicago, Ill., October 14-17. The Association's Time and Place Committee previously had selected Atlantic City as the meeting place, primarily to accommodate the exhibition of equipment and appliances then scheduled. Later, however, it developed that no exhibition was to be held in conjunction with the 1935 convention and preferences for a convention city immediately shifted from Atlantic City to the Middle West. A special committee of the Executive Board was appointed to look into various convention facilities available in the Middle West and elsewhere, and after due consideration was requested to recommend a city. The committee received bids from Chicago, Cleveland, and New Orleans and reported at a meeting of the Executive Board, May 31. As a result of careful investigation of convention facilities by the committee and full discussion of the matter by the Board, Chicago was chosen.



The Palmer House, Chicago, scene of the coming annual convention

Fourth Meeting in Chicago

The coming October meeting will be the fourth one held in Chicago; the three previous occasions being in 1921, 1927, and in 1933 during the World's Fair. The selection of the Palmer House, one of the largest hotel structures in the world, as the headquarters for the 1935 convention, is a particularly happy one. This hotel has 2,200 guest rooms, 60 stores and shops, 16 private dining rooms (including 2 great ballrooms), and 6 large public dining rooms, including the well-known Empire Room, said to be Chicago's gayest dinner-supper club. It is believed that facilities of the Palmer House are sufficient to accommodate all of the general, sectional and special meetings to be held during convention week. Members of the Association will receive shortly a pamphlet containing a full description of the hotel and rates for accommodations.

Left—The Empire Room, Chicago's smartest dinner-supper club. Right—Foyer to grand ballroom

The Palmer House lobby

Incidentally, The Palmer House is one of the largest users of gas in Chicago. The industrial gas sales department of The Peoples Gas Light and Coke Company recently completed the installation of gas conversion burners and auxiliary equipment under a 645-horsepower, water tube steam boiler, capable of developing up to a maximum of 1,400 boiler horsepower. This gas-fired boiler, one of the largest in the city, supplies steam for all the cooking processes, furnishes the motive power for all the pumps, and heats the water for the hotel seven months in the year. The daily demand for hot water amounts to 308,000 gallons. During the damp, cool days of spring and fall, gas supplies steam heat to the 2,200 rooms of the hotel.

The business programs now being whipped into shape will follow the same general outline that worked so successfully at last year's great meeting in Atlantic City. The objective constantly being kept in mind in building these programs is to feature subjects of definite interest to the individual and at the same time include authoritative considerations by competent speakers of the most vital national issues facing the industry today. Plans are already in a well-advanced stage for the three general sessions to be held on Tuesday, Wednesday and Thursday, October 15-16-17. In addition to the formal Association business to be transacted at these sessions, speakers will bring to the delegates the latest information on current problems of industry-wide appeal. The departmental and sectional programs will deal with the more specific problems met in every-day work and provision will be made this year, as was done in Atlantic City last October, to afford ample opportunity for free and open discussion of topics through the medium of symposiums and round table gatherings. In addition, the sectional programs will embrace a consideration of progress reports and other matters that are regularly scheduled for presentation at the annual convention.

Stairway to lobby

An innovation this year on the general sessions program will be an hour devoted to short addresses and other features suitably commemorating the tenth anniversary of the establishment of the A. G. A. Testing Laboratory. The Laboratory was established in 1925, in Cleveland, with a fund made up of contributions by the member companies of the Association. Today, about 90% of all gas appliances offered for sale to the consuming public have been approved by this institution and are identified by its seal of approval. Members will be advised later concerning the details of this anniversary celebration.

The natural gas men contemplate holding a symposium in which four main subjects will be presented by competent speakers and then discussed freely from the floor. The committee in charge of this program believes that a departure from the usual formal presentation of subjects will enable many delegates to make a personal "give and take" contribution to the deliberations.

The Accounting Section, true to its traditions, has its program in practically final shape. A popular feature will be the holding of luncheon conferences, concerning which information has been published in this magazine. Two afternoon sessions—Tuesday and Thursday—will be devoted to the accounting business meetings.

Men and women in the industry who are charged with the execution of publicity and advertising work will find themselves in agreeable company at a luncheon symposium to be devoted to an informal

Right—Foyer to grand ballroom

discussion of some outstanding subjects. It is planned at present to have an open discussion of radio broadcasting programs, the proper use of direct-mail lists based on information to be disclosed as the result of a questionnaire now being circulated, a new form of national advertising which appears to hurdle most of the objections formerly charged against advertising of this nature, and one other subject yet to be selected. This luncheon symposium will be held on Thursday so as not to conflict with the meetings of the Commercial Section.

With two afternoon business sessions scheduled for Tuesday and Wednesday, the Commercial Section's program will deal with up-to-date sales and merchandising plans and ideas of a down-to-earth nature.

Home Service Program

The earliest risers on Wednesday morning, October 16, will be the home service directors of gas companies who will attend the annual home service breakfast. The program now being prepared for this breakfast conference will embrace matters of specific interest to the sales departments of gas companies.

The industrial gas men, always present in large numbers at an annual meeting, will have three afternoon sessions—Tuesday, Wednesday and Thursday—devoted to their usual serious consideration of pertinent topics. The first meeting will feature an address on advertising and consideration of methods and services that enter into and are necessary to an appreciation by the customer of good gas service. The second meeting will take the form of a round table discussion at which the promotion of gas fuel in ferrous, non-ferrous, ceramic and wholesale food industries will be discussed. The final meeting will be a round table symposium covering the various uses of gas in the commercial field, embracing specifically hotels and restaurants, barber and beauty shops, and delicatessens and drug stores. This session will be concluded with a paper on dealer cooperation. The latest plans contemplate the holding of a dinner or luncheon preceding the meetings of the Industrial Gas Section at which all industrial gas men will have an opportunity to meet each other personally and get better acquainted.

Plans of the Manufacturers' Section will be announced just as soon as the report of a special committee is made available.

There will be three business sessions awaiting the engineers who attend the convention—on Tuesday, Wednesday and Thursday afternoons. Speakers and topics for these three meetings have been selected and the committee in charge of the program is optimistic of the attendance.

Chicago has never been a disappointment so far as entertainment is concerned, whether it be a convention feature or whether it be a part of the live and breezy city itself. There will be variety enough to suit the choosiest of both sexes and, fortunately, the Palmer House is right in the center of things.

Gas Industry Accidents Increase in 1934

INDUSTRIAL members (including public utilities) of the National Safety Council and associated organizations reported a frequency rate of 15.29 disabling injuries in 1934 for each million man-hours of exposure, and a severity rate of 1.70 days lost (including arbitrary time charges for fatal and permanent disabilities) for each thousand man-hours worked. These rates are each about 5 per cent higher than 1933.

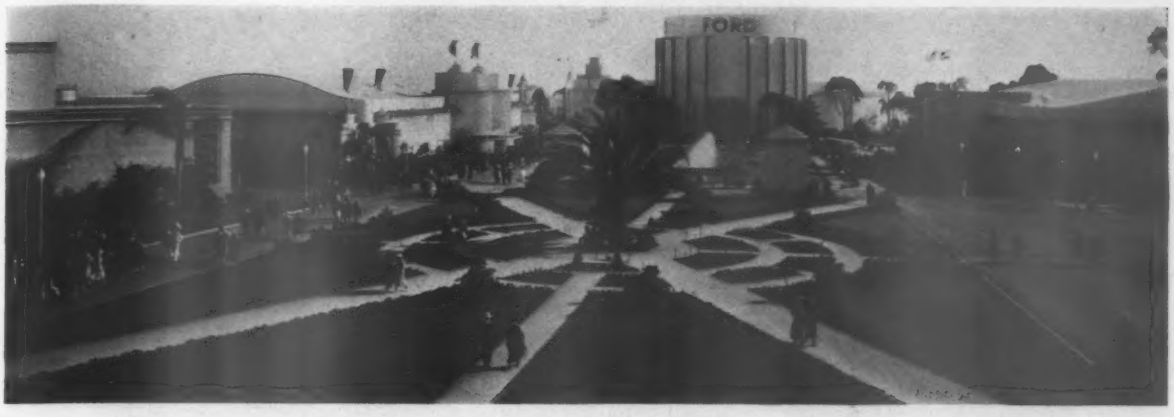
A group of 422 gas utilities reporting to the American Gas Association Statistical Department, and representing more than 83 per cent of the manufactured and natural gas industry in the U. S. had a frequency rate of 14.7 disabling injuries in 1934 for each million man-hours of exposure. While this was slightly below the frequency rate of 15.3 reported by all industries, it nevertheless represents an increase of 27.8 per cent from the frequency rate of 11.5 reported by gas companies for the year 1933. These same gas utilities also reported a severity rate of 1.01 days lost for each thousand man-hours worked, compared with the figure of 1.70 reported to the National Safety Council by all industries. However, the all industry figure represented an increase of only 5 per cent from the preceding year, whereas, the severity rate reported by gas companies increased 14.8 per cent from 1933.

Severity Record Favorable

The 1934 experience of the gas industry in severity shows up favorably in comparison with records of other utilities. The gas companies reported 1.01 days lost for each thousand man-hours worked, while the corresponding figure of all public utilities was 1.68. Results from the standpoint of frequency, however, were not so good; all public utilities averaged 10.54 for frequency, in comparison with 14.70 for gas companies. This record is the more disappointing in that it is the first time since 1927 that the gas industry has failed to show a reduction each year in the frequency rate of disabling injuries.

In view of the industry's steadily improving record of accident experience during previous years, it is difficult to avoid the conclusion that the relatively unfavorable showing during 1934 was the result, in large part, of the re-adjustment of working conditions which occurred during the past two years. While no N. R. A. Codes were ever approved for either the manufactured or natural gas industries, both groups were among the first in the country to voluntarily comply with those provisions of the National Industrial Recovery Act designed to increase employment and shorten hours of work. This is indicated by the fact that the total number employed in the gas industry rose from 119,000 in 1933 to 129,790 in 1934, an increase of 9 per cent. At the same time the average yearly working time per employee fell from 2,402 hours in 1932 to 2,069 in 1934, a decline of 14 per cent in the average hours worked per employee. This adjustment of forces, the addition of men, and the consequent increased problems of supervision under revised working schedules appear to be the major cause of the increase in injury frequency and severity experienced by the gas industry during 1934.

A six-year summary of accident experience of the manufactured and natural gas industry in the United States has been released by the Association's Statistical Department. It shows that the 1933 frequency rate for both divisions of the industry was the same, namely 11.6. For the manufactured gas companies the rate rose to 13.9 per cent in 1934, an increase of 19.8 per cent. Natural gas companies, however, showed a jump of 37.9 per cent in the frequency rate, which reached 16.0 for this group in 1934. The severity rate for manufactured gas companies rose from 0.73 in 1933 to 0.94 in 1934, an increase of 29 per cent. For natural gas companies however, the severity rate declined, dropping from 1.13 in 1933 to 1.11 in 1934, an improvement of 1.8 per cent. This doubtless reflects the decline of natural gas pipeline construction, a factor which contributes to the somewhat higher level of severity rates ordinarily experienced by natural gas companies.



General view of San Diego fair.

Gas Plays Leading Role at Exposition

By GENE ADLER

San Diego Consolidated Gas and Electric Company

GAS fuel is very much on the job at the California Pacific International Exposition, which opened in San Diego, California, on May 29 and to extend until November 11. All cooking is done either by gas or electricity, most of it by gas.

The largest restaurant is the Cafe of the World, which seats 900 people. To meet the requirements of this mammoth dining room and the Coffee Shop, twelve sections of heavy duty commercial gas ranges, a 300-gallon water heater, and other accessories such as dish washers, stock pots and steam tables, have been installed. Next largest is the Cafe del Moro in the House of Hospitality, seating about 400 guests. Cooking here is done on a two-oven French type range and one heavy duty commercial section. Other leading cafes within the grounds which utilize gas in cooking and heating processes are the Solano Cafe in the Spanish Village, the Palisades Cafe, and Eckert's Bavaria.

Aside from these, there are many lesser lunch counters, and 14 hot dog and hamburger stands. Gold Gulch has five hasheries, starting with First and Last Chance Saloon, and including the Chinese Restaurant, Spanish Kitchen, Stamp Mill and the Bar X Ranch. Despite the apparent antiquity of everything in the Gulch, up-to-the-minute cooking and heating by gas obtain at all these places. Such luxury was never enjoyed by the original Gold Gulch Gertie, even in her palmiest days.

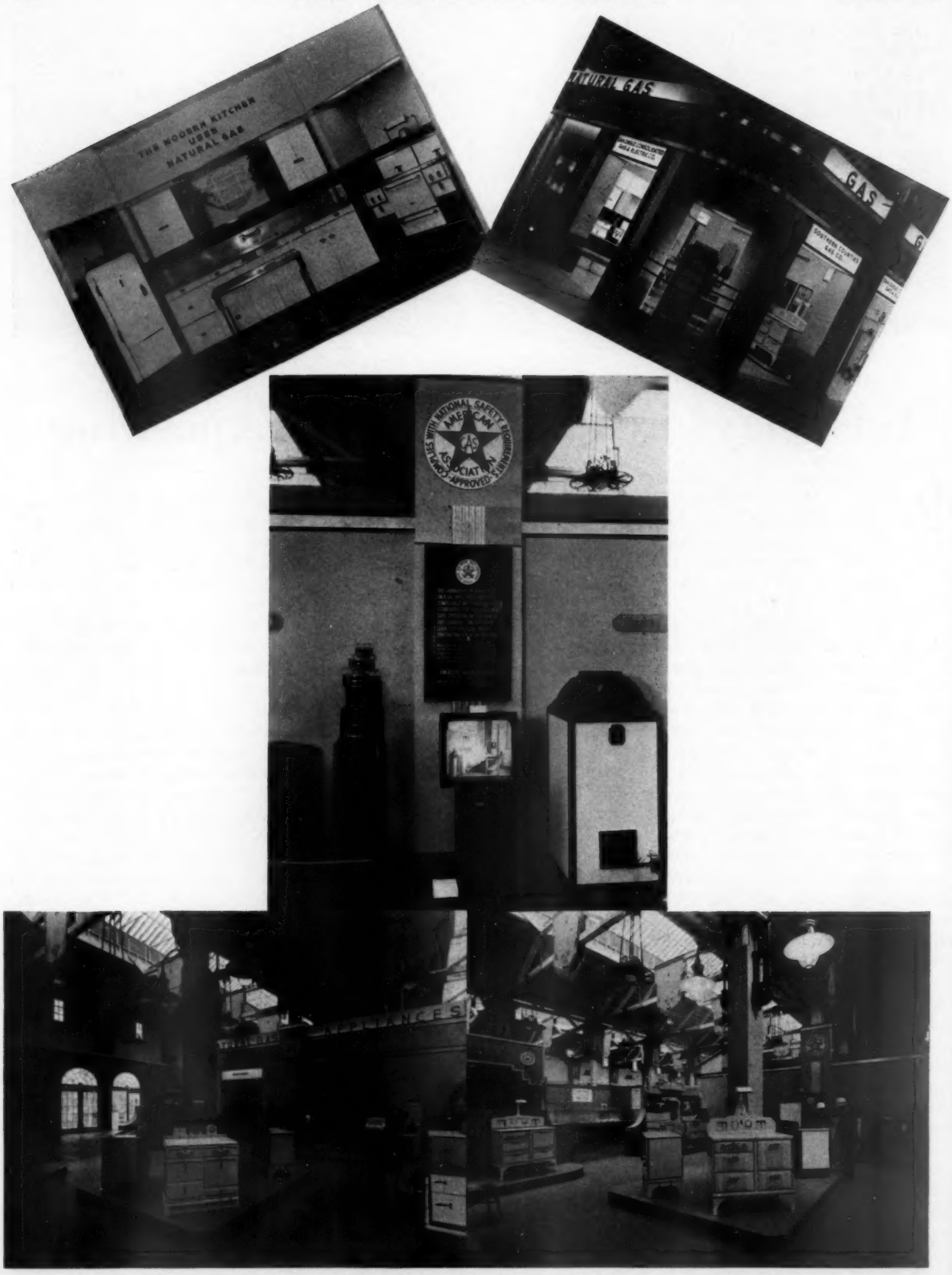
Other uses of gas are many and varied, ranging from the feminine fripperies at Leroy Gordon's beauty parlor, through the manufacture of candy, ice cream cones, junket, French fried potatoes, and popcorn, to such things as an 8-horsepower boiler in the Coca Cola display and the firing of a pottery kiln for Pacific Clay Products Company. Miss America has her own private water heater, while poor old Stella, dating from 1868, has none. The Nudists in Zoro Gardens are afforded the benefits of gas refrigeration and gas cooking, but as yet rely on the sun for heat.

Venetian Glass Factory

Casa de Tempo, the model home, is equipped with a late model gas range, storage water heater, two radiant heaters and two latest type, forced warm air central heating units. The latter may be used for Winter heating, and for cooling in Summer with outside air; or, with some additions, may be changed into a complete air-conditioning plant.

One of the largest gas users at the Exposition is the Venetian Glass factory located on the Midway. This institution uses each day an amount equal to the average monthly consumption of four families. A specially designed gas-fired furnace melts the sand mixture in special crucibles, making it into glass at a temperature of 2500° F. This is held in a molten condition to be used by the molders and blowers as they need it. As the molders go about their work of making intricate vases and bric-a-brac, the heat of the furnace is utilized to maintain the glass in a plastic condition. On completion, each piece is placed in a special tempering oven, likewise gas heated, where it is slowly cooled to room temperature. The entire process is highly technical, and the design and installation of the equipment was taken care of by the sales department of the San Diego Consolidated Gas and Electric Company.

The largest gas user in point of cubic feet consumed is the Ford exhibit. A gas-fired boiler of 35-horsepower capacity in the basement of the Ford building supplies steam at 150 pounds per square inch pressure for various industrial operations throughout the exhibit. Some of these are—vulcanizing tiny rubber model Fords for the Firestone exhibit, operating steam hammers, manufacturing Bakelite from soya beans, and other miscellaneous uses. Direct gas heat is also used in several processes in the exhibit, and in one instance works in conjunction with an electric furnace to prevent scaling of iron bars while being heated.



Five views of the gas exhibit at the Fair

The natural gas exhibit is divided into two sections, one sponsored by the San Diego Consolidated Gas and Electric Co. and the Southern Counties Gas Co., and the other occupied by the manufacturers' section of the Pacific Coast Gas Association. All types of appliances are prominently displayed, including storage water heaters, one of which is a copper model cut out and lighted inside so that one can see the entire method of construction. An Electrolux refrigerator revolves slowly on a turntable, while centrally located in the exhibit is a refrigerating unit removed from the box which helps the attendants to explain how a gas flame can produce zero temperature and ice. There is also a show model of a forced warm air furnace, nickel trimmed, whose glass panels reveal the interior heating element and silent motor-blower unit. At other points in the room are ranges and heating equipment of the latest types.

Model Kitchen

At the east end of the booth is a model kitchen that any woman would delight in wrapping up and taking right home with her. The range is the newest model Magic Chef in white enamel with black trim. This stove has a divided cooking top and a heavy insulated oven which is completely automatic both as to time and temperatures. The refrigerator is a Princess Model de luxe Electrolux, porcelain inside and out. On the wall is the latest model Ruud instantaneous water heater in the regular chromium trim. Below the water heater we find a beautiful console room heater done in white and chromium for just such a kitchen as this. In the center of all these is the latest design of monel metal sink, flanked by white enameled steel cabinets, and keeping company with a monel top table whose legs match the range. To top off the entire kitchen effect we look through the window above the sink to view the San Diego harbor, including Point Loma, Coronado and North Island—done in oil.

The Pacific Coast Gas Association is exhibiting a variety of ranges, water heaters, circulating heaters and central furnaces, all contributed by Coast manufacturers. Many of the models are cut away and lighted internally so that a clear idea of their construction and operation may be gained. Automatic control devices for gas equipment are shown in actual operation, as well as a display panel containing all types of thermostats and what-have-you-stats necessary for convenience. The crowning feature of this part of the exhibit is the gas arc lamps high in the air above the display, each having a capacity of 3,000 candlepower available at the touch of a switch. Bathing the entire exhibit in a soft yellow flood of light, they invite comparison with other types of illumination.

A. G. A. Exhibit

A feature of the manufacturers' section is a display by the American Gas Association Testing Laboratories. A Laboratory Approval Seal two feet in diameter has been placed at the top of a pilaster on one wall and a second one of similar size is located on the opposite wall. Below the large Approval Seal is a placard with a smaller seal done in oil and a brief explanation of this symbol in gold letters. On the floor underneath the placard a baloptican machine continuously projects on the screen 76 different views of testing or research equipment at the main Laboratory in Cleveland, or its Pacific Coast Branch in Los Angeles.

Between the two exhibits is a large wall map of natural gas fields and transmission lines in Southern California. Across from this is a working model of what we might call the gas company's "cash register." A show model of a standard meter setup has been built, with the regulator cut out to show its working parts. The meter has glass panels, and glass discs have been cemented to the meter diaphragm so that it is possible to see entirely through the lighted interior. A small blower supplies air instead of gas to operate the meter. The entire assembly clears up the mystery which, to the average customer, seems to shroud this recording device.

The task of making gas service available wherever it was needed was a tremendous job in itself, but was very capably handled by the local gas company's Distribution Department, and the preliminary expense has been well justified. It has been found necessary to change over to high pressure distribution in order to insure proper service to all customers. This called for setting regulators at each meter and the removal of some of the mains and services. In all, nearly 16,000 feet of pipe—almost five miles—was placed for serving the 63 meters installed at the start of the Exposition. It's a good Fair, and gas is doing its bit to make it so.

Is the World Growing Warmer?

EARL CHAPIN, writing in the July issue of "Forum" on the subject, "The World Grows Warmer," presents convincing evidence that weather conditions have deviated from "normal" so consistently for the past 50 years that the question now arises—as to whether that deviation is not a permanent thing. By citing numerous authorities on the weather in widely separated geographical areas, Mr. Chapin shows the trend of temperature has been steadily upward for decades and concludes that it is quite possible that the world is growing warmer.

The study shows "that temperature trends, not only in the Northern Hemisphere but in the Southern Hemisphere as well, not only in the United States but the world over, have been prevailingly high, on an upward climb which for over 50 years has shown no evidence of recession." One authority, for example, provides the information that the fall, winter and spring averages for the past 20 years are from 2.5 degrees to nearly 4 degrees higher than similar averages 60 or 70 years ago. New England winters of the '70's and '80's were three degrees or more colder than winters of the last 20 years. Autumns in the United States have been getting warmer for the last 100 years.

What is more remarkable, according to Mr. Chapin, is that "temperature records of other countries of the Northern Hemisphere and also of the Southern Hemisphere show strikingly similar conditions. Studies from Paris, Vienna, Greenwich, Santiago, Buenos Aires, Cape Town, and other widespread points on the globe show that this trend is marked the world over.

Gas Air Conditioning Hits Its Stride This Summer

By EUGENE D. MILENER

American Gas Association

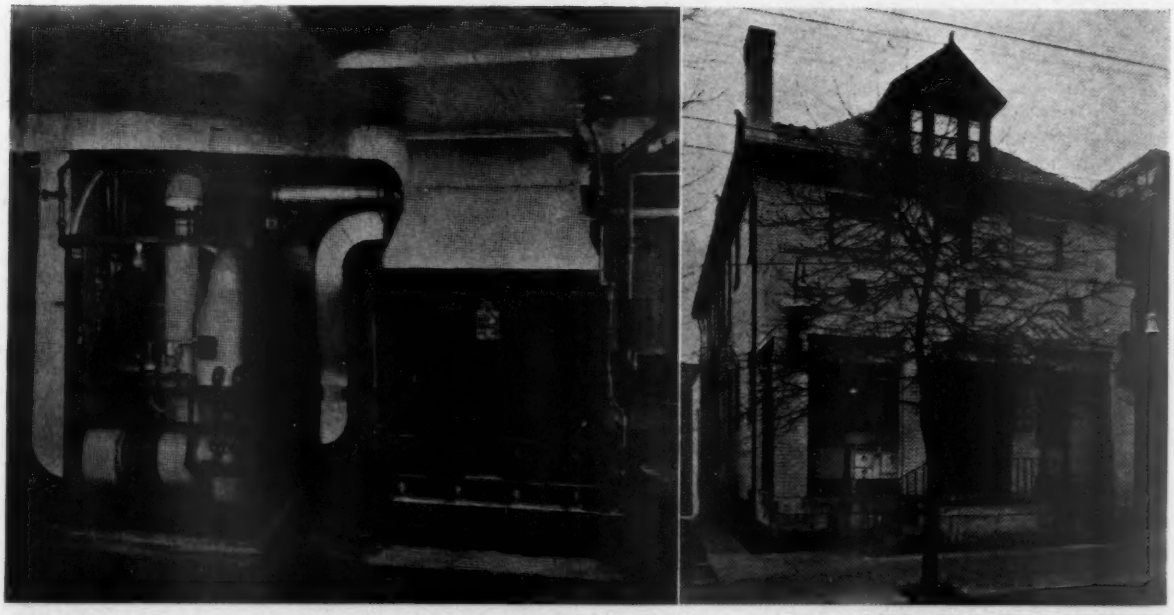
THE hot, humid weather is here. Everyone seeks relief. Some go to the mountains, some to the seashore and some trek North. But most people, except for a scant two or three weeks, continue their daily routine and take the weather as they find it.

This summer gas has been put to work keeping some of these stay-at-homes comfortable. In residences, stores, restaurants, offices and shops gas-operated summer air conditioners are tempering the air so that to those fortunate enough to live, work or transact business in these structures, a sense of exhilarating buoyance has replaced the usual depressed summer feeling.

Examples of comfort conditioning are shown in accompanying photographs. The illustrations are representative Bryant-Silica Gel installations. Such installations have been made in over 12 states. They are operating satisfactorily on manufactured, natural and mixed gases.

This season is the first that standard, factory-made summer air conditioning equipment has been available to the gas industry for sale to its customers. Before the warm weather arrived the Bryant Heater Company conducted gas air condi-

Right—*Claire Beauty Shop, Chicago; one of the first beauty shops to be air conditioned in the summer with gas*



Bryant gas-operated summer air conditioner installed beside winter air conditioner in the Peoples Natural Gas building in Greensburg, Pa. Ideal comfort conditions in summer are made possible in the offices and sales rooms of the building, shown at the right, by this gas equipment

Appliance sales floor of the Stamford Gas and Electric Company, Stamford, Conn., which is made comfortable by gas summer air conditioning

Main office building of the Stamford Gas and Electric Company in which is installed a Bryant gas-operated silica gel air conditioner

Installation of Bryant silica gel dehydrator which air conditions the building of the C. F. Lytle Construction Company, Sioux City, Iowa

Exterior view of C. F. Lytle Construction Company building

Interior view of offices of C. F. Lytle Construction Company, where better working conditions resulted from the installation of gas summer air conditioning

tioning engineering schools in six cities extending from Houston, Texas, to Boston, Mass. These schools gave gas utility engineers the opportunity to learn at first hand the principles of producing comfortable summer conditions by the direct dehydration method, which is particularly adaptable for use with energy derived from gas. With the perfection of gas summer air conditioning, the gas industry is now in a position to offer a complete year round, winter and summer air conditioning service. This is unlike conventional summer air conditioning, which requires a different source of energy for winter from that used in the summer.

The gas companies have recognized the opportunity that is offered to them to become an important factor in this new and growing field. The utilities are submitting estimates and proposals as rapidly as they can be prepared and additional installations will result. The practical field experience which gas men are getting this summer is preparing a foundation on which a superior customer service will be built and new business secured. This is an important means suitable for demonstrating anew to the public that gas is a modern source of energy and that modern gas equipment, capable of rendering modern services, is available.

The direct dehydration method of summer air conditioning with gas, which was developed under the sponsorship of the Committee on Industrial Gas Research, is receiving an increased amount of attention in air conditioning engineering circles. An increasing number of leading air conditioning engineers have expressed the opinion that its exclusive features, such as separately controlled dehumidifying, represent an advance and refinement over the older methods, where the amount of dehumidifying and cooling cannot ordinarily be controlled independently of each other.

Surface Combustion Announces New Summer Air Conditioning System

By EUGENE D. MILENER
American Gas Association

THE second manufacturer member of the American Gas Association to offer gas-operated summer air-conditioning apparatus using the direct dehydration method is Surface Combustion Corporation of Toledo, Ohio, which announces the introduction of a system under the trade name of Kathabar. Kathabar is derived from a Greek term meaning "Healthy Air." This system, which uses a liquid adsorber termed Kathene for dehydration and which is activated with gas heat, operates on the general principles that have been advanced by the Committee on Industrial Gas Research since it began sponsoring the application of gas for commercial, industrial and residential air conditioning in the summer. It was designed by Dr. F. R. Bichowsky, a physicist of wide experience in air conditioning and refrigeration fields.

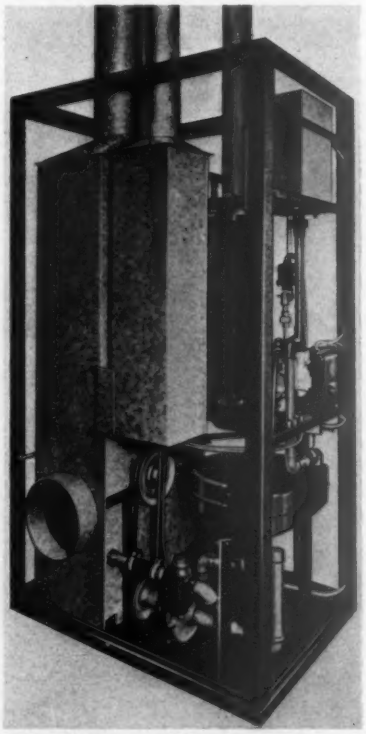
Kathabar, gas-operated summer air conditioner and low temperature industrial dryer.

Direct Dehydration Adopted

It should be of particular interest to gas men to note that Surface Combustion Corporation, after making extensive investigations into all possible methods of gas summer air conditioning, has become convinced that the direct dehydration method offers the best means at this time for building up equipment sales and gas load, most of the latter being entirely off peak.

Kathene is a staple, non-corrosive, non-caustic solution of great drying power. It is possible to dry air down to 12% relative humidity with "Kathene A" and to even lower relative humidities with other members of the Kathene group.

In this system the air is washed with Kathene, dried and simultaneously heated and cooled in an air washer. The washer or contacting tower may be of various types. In the standard units, the tower is of the packed type, air entering at the bottom and passing upward. Kathene collecting in the bottom of the tower is pumped through a specially designed cooler to the top of the tower where it meets the upcoming air, cools, dries and washes it. Automatic regeneration of the liquid by means of gas heat is provided, making the unit of the continuous operating type. The outcoming air always has the same properties; there being no change in direction of air flow at any time.



New air conditioning unit with the cover removed.

Kathene liquid may be regenerated in a number of ways. In the standard apparatus, a portion of the Kathene circulating through a pump is heated in an ordinary side arm gas water heater to near the boiling point and the water is

(Continued on page 311)

Non-Ferrous Metal Treating with Gas

By RALPH L. MANIER*

Industrial Heat Engineer
The Syracuse Lighting Co., Inc.
Syracuse, N. Y.

R. L. Manier

THE advantages of gas heat for the treating of ferrous metals have been given acceptance in the majority of the plants throughout the country. These advantages have been developed and demonstrated to industry to such an extent that most plants have the desire to use gas heat, and if they are not doing so, either the rates are not designed to get the business or the plant is not in a position to finance the change from their present fuel to proper application of gas.

Electric Developments

In the non-ferrous metal treating field, conditions started out slightly different. The airplane industry brought about the need for lightweight metals which still had good physical properties. Heat treatments recommended for aluminum and its various alloys were at lower temperatures than in the ferrous metal treating. The electric furnace manufacturers saw a potential field for electric heat and developed some very fine furnaces to fill this need. For a time electricity had such acceptance for such treatments that many of the users of such aluminum alloys seemed to think that electricity was the only form of heat that could meet their needs.

Since that time, the gas furnace manufacturers and the industrial gas engineers have ably demonstrated that gas can produce results equally as good and often at appreciable savings due to the lesser cost of gas heat and the efficient application of that fuel.

Most of these furnace applications are fired externally from the heating chamber with the products of combustion and air circulated through the furnaces at the temperature at which the stock is to be treated. This assures the most uniform heating of all parts with guarantee against overheating of any thin sections. These furnaces were both of the continuous and batch type.

Some of these alloys have been heat treated in low temperature gas heated salt baths.

With the development of automatic refrigerators, demands for bright annealed copper tubes brought about new specifications for materials. I believe that the desired product was first brought forth from an electric furnace. As a result, refrigerator manufacturers did not only specify bright annealed tubes, but they specified electrically annealed bright tubes.

Conditions Now Changed

Again the gas industry had to overcome this obstacle. In one case, the gas furnace manufacturer submitted samples of bright annealed stock which were fully as good as from the other source of heat, gave operating cost and investment requirements. All of these factors were slightly in favor of gas but the prospect said he had no choice in the matter as his customer's specification had called for electrically annealed tubes and they would consider no other type.

Over a period of time this condition has also changed. Gas-fired muffle furnaces have been developed with controlled atmosphere which will produce bright annealed copper, brass, nickel, silver and other non-ferrous materials. The metal industries have given acceptance to these furnaces so that the gas industry may now go out and sell its gas for such metal treating purposes.

W. M. Hepburn, speaking at the last A.G.A. Convention, stated "In tracing back the evolution of the present controlled gas atmosphere, it is of interest to note that one of the first activities of the A.G.A. Committee on Industrial Gas Research was along these lines. In the preparation of this paper I have perused most of the records kept on this research. Here, for example, is an extract from an early report from one of the men assigned to this activity:

"'It is becoming more and more important that the manufacturer of metals has available equipment to heat-treat and anneal his metallic products so that they are finally produced in a clean, bright condition demanded by his customers.

"'The development of domestic refrigeration apparatus, for example, requires the use of metallic tubes, through which the refrigerant must pass, that are absolutely free from any scale forming impurity which might become dislodged and cause subsequent stoppage of the needle valves of the refrigerating mechanism. Endless similar examples might be cited of new industrial developments which impose severe demands upon the manufacturer of metals and alloys.

"'In order to arrive at the condition which must be maintained to result in the bright annealing of metals, we must study the chemical reactions which can be obtained between the combustion products in question and the metal being treated.

"'Now, very fortunately, during the past decade many scientists in our various academic institutions have been concerned with the measurement of the free energy of metals and metallic oxides. It is exactly this data which is fundamentally necessary in order to determine what conditions must be maintained in the furnace in order to prevent the formation of scale on metals.'"

Mr. Hepburn continued "Again here is the outline of the study set up at Chase Brass Works:

	Variables
1. Work	Copper Brass Red Brass Yellow
2. Condition of work	Oil free as it comes from mill
3. Atmosphere	H_2O CO_2 N_2 CO Mixtures-Gas-Rich Air-Neutral-Lean
4. Time Interval	30 minutes 1 hour 1 hour 30 minutes 2 hours

* Chairman, Non-Ferrous Metal Treating Committee, Industrial Gas Section, A. G. A.

5. Temperature	900
	1000
	1100
	1200
	1300

"Now, as you see, these investigations were getting exceedingly warm."

During the years of the depression the furnace manufacturers have not been standing still. There has been improvement in furnace design by the use of combination insulating refractory brick and more insulation. The diffusion flame application to continuous copper billet heating furnaces has proven a great success, giving a much better heat to the billet without overheating and with minimum of surface reaction.

Modern Equipment Necessary

There are still many non-ferrous metal treating furnaces that are using other sources of heat than gas. There are also many gas furnaces treating such metals which are crude and obsolete compared to the furnaces of today. The industrial gas engineers should try to replace the furnaces using other heat than gas, and should advise their present customers of the improvement in the art and try to get them to modernize. If they do not do this, the existing customers with obsolete equipment may fall an easy prey to competing heat salesmen.

If the industrial gas engineer could approach his customers with actual knowledge of furnaces and results obtained elsewhere, he would have a valuable additional sales tool. Such data would help prove the acceptance of gas for such purposes.

Reference File

The A. G. A. Non-Ferrous Metal Treating Committee has, therefore, attempted to build up such a reference file at A. G. A. Headquarters. A letter has been sent to each gas company requesting that they fill in the attached cards giving information on non-ferrous metal treating applications in the territory which they serve. Very interesting and useful data is being received. The more reports that are submitted, the more valuable will be the file to both you and the other fellow. Please cooperate by sending in as many reports as possible. The Association will furnish extra cards on request.

You might be interested in just a few samples of reports turned in. I will briefly describe four recent controlled atmosphere furnace installations.

One furnace was installed for bright annealing of copper and brass tubing in straight lengths and coils. The work to be heat treated is placed on a continuous alloy mesh belt and carried through the alloy muffle located in the heating chamber. The furnace has been designed to produce a bright annealed product at the rate of 600 pounds of work per hour.

The furnace unit has a heating zone 9′ 6″ in length with an alloy muffle and a 19′ long cooling zone with a steel muffle. Sixteen tunnel type burners located in the side walls of the furnace have a sufficient capacity to quickly heat the work to the operating temperature of 900 to 1200 degrees F. These burners fire above and below the muffle and thus insure uniform heating conditions throughout the heating chamber. The furnace is lined with 4½″ of insulating firebrick and 4½″ of insulation. Heat seals are provided at each end of the muffle so as to prevent infiltration of air.

Atmosphere gas is supplied to the muffle by a standard Surface Combustion gas preparation unit. This unit provides such an atmosphere by the partial combustion of gas and air that an atmosphere will result which will bright anneal the work.

The work is discharged from the cooling zone at a temperature of 200 degrees F. A recent test on this furnace installation operating at a temperature of 1200 degrees F. has shown that 4250 pounds of net work was annealed during a time interval of 7½ hours. The total furnace gas required during these 7½ hours amounted to 4100 cubic feet of 1000 B.t.u. natural gas. On a pound of work basis, this would result in a consumption of .96 cubic feet of natural gas.

Installation Described

Another controlled atmosphere furnace installation was put into operation consisting of one continuous-belt-type heating furnace with a cooling chamber. The purpose of this furnace was for heating steel, nickel, silver, bronze, copper and brass stampings to a temperature of 825 degrees C. with the work passing through a muffle located within the heating chamber. The work then passes through a cooling zone where the temperature of the work is reduced before discharging into the atmosphere.

Eductors are provided at each end of the muffle in order to prevent the infiltration of air.

Continuous gas-heated bright annealing furnace for non-ferrous metals. (Courtesy Surface Combustion Corporation).

The capacity of this unit is 540 pounds of gross work per hour heated to a temperature of 1500 degrees F. The furnace has an internal width from wall to wall of 2½′, a heating length of 8′, and a cooling length of 20′. The belt width available for work is 18″. The opening at each end of the muffle is 6″ maximum; an adjustable cover enables the furnace operator to vary this slot opening.

The side walls and arch of the furnace are constructed of 4½″ of insulating firebrick and 4½″ of insulation. The muffle through which the work passes is made of cast alloy, that is to say that part of the muffle which is in the heating chamber while the muffle in the cooling section consists of welded steel plates incorporating a water cooled jacket.

A standard gas preparation unit prepares the desired furnace atmosphere and uses for its raw base city gas having a B.t.u. content of 530 per cubic foot.

High-Pressure Burners

City gas is also used to fire the furnace through means of two-stage high pressure velocity burners located in the side walls firing both above and below the muffle. When heating at the rate of 540 pounds of gross work per hour to a temperature of 1500 degrees F., our estimated fuel consumption was 623 cubic feet of 530 B.t.u. gas.

A somewhat smaller controlled atmosphere annealing furnace was installed. The purpose of this furnace was for heating steel and brass retainers and keeper rings to a temperature of approximately 1500 degrees F. with the work passing through a muffle located within the heating chamber after which it passes through a cooling zone where the temperature of the work is reduced to a point where the air in the room has no detrimental effect on the surface of the material.

To prevent air from entering the muffle chamber, ejectors are provided at each end of the muffle. It is, of course, necessary to have low pressure air for these ejectors in order to produce a gas curtain at the entrance and discharge end of the muffle. A gas preparation unit likewise provides the furnace atmosphere.

Gas preparation machine for controlled atmospheres in non-ferrous heat treating furnaces. (Courtesy Surface Combustion Corporation.)

The capacity of this unit was based on heating 150 pounds of work per hour to a temperature of approximately 1500 degrees F. The work consists of rings ranging from 1″ to 8″ in diameter.

The furnace has an internal width from wall to wall of 2′, a heating length of 4′, and a cooling length of 8′. The belt width available for work is 18″.

The side walls and arch of this unit are lined with 4½″ of insulating firebrick and 4½″ of insulation.

When heating at the rate of 150 pounds of net work per hour plus the necessary belt weight, both being heated to a temperature of 1500 degrees F., the estimated fuel consumption was 56 cubic feet of butane gas per hour.

Continuous-Belt-Type Furnace

For the last installation to be described, I am choosing the continuous-belt-type heating furnace with a cooling chamber.

The furnace is used for heating bronze bushings to a temperature of 1500 degrees F., after which they are cooled and discharged from the furnace. The work treated consists of oilless bearings which are made from a compound of copper, tin, carbon and some organic binder. The compound is pressed to the shape of the bearing desired and is then subjected to a very definite heating cycle.

The work rests on trays and passes through the muffle filled with a special atmosphere gas. Eductors are provided at each end of the muffle to prevent infiltration of air.

The capacity of the unit has been based on heating 200 pounds of work per hour to a temperature of 1500 degrees F.

The furnace has an internal width from wall to wall of 23½″, a heating length of 10′, and a cooling length of 20′3″. The belt width available for work is 12″.

The side walls and arch of the furnace are lined with 4½″ of insulating firebrick and 5″ of insulation. The cooling section which is an extension of the muffle in the heating chamber is made of welded steel plate and is equipped with a water space for controlled cooling.

A gas preparation unit using approximately 50 cubic feet of natural gas to prepare the desired atmosphere gas for the furnace muffle is a part of the furnace installation.

When heating at the rate of 200 pounds of net work per hour to a temperature of 1500 degrees F., our estimated fuel consumption was 259 cubic feet of natural gas.

Readers having non-ferrous treating furnaces on their lines should cooperate by sending in the facts to the committee.

In conclusion, the Non-Ferrous Metal Treating Committee hopes that a really useful file of data on non-ferrous metal treating will be available at A. G. A. Headquarters in the near future, and that the industrial gas men will make proper use of this additional sales help.

Affiliated Association Activities

Michigan Gas Association

D. H. Frazer, Jr.

D. H. FRAZER, JR., president of the Battle Creek Gas Co., was elected president of the Michigan Gas Association at its annual convention in Grand Rapids, Mich., June 20-22. Other officers are: Vice-President Newell E. Loomis, merchandise sales manager of the Detroit City Gas Co., and Secretary-Treasurer A. G. Schroeder, secretary of the Grand Rapids Gas Light Co.

Mr. Frazer entered the gas business at the Battle Creek plant in December, 1921. He was elected director, assistant secretary and assistant treasurer two years later; vice-president in 1930; and president on February 7 of this year. He has also been connected with various other utility enterprises during this time, serving as secretary of the Gas Engineering Service Co., Federated Utilities, Inc., National Gas & Electric Corp., and National Utilities Co. of Michigan. He is president of Public Gas & Coke Co., vice-president of Michigan Fuel & Light Co. and Northern Indiana Fuel & Light Co., and secretary of Wisconsin Fuel & Light Co.

President D. W. Hayes of Port Huron presided at the meeting which attracted widespread interest in Michigan utility circles. Among the speakers were: Major Alexander Forward, managing director of the American Gas Association; Frank A. Newton, Commonwealth & Southern Corp.; Professor Alfred H. White, of the University of Michigan, and many other prominent gas men. Many technical and sales problems were discussed at the business sessions.

Pacific Coast Gas Association

GEORGE S. CAMPBELL, general chairman of the Pacific Coast Gas Association's convention committee for the September 17-20 annual meeting, has announced his staff of co-workers who will take charge of the several branches of convention activity. Sessions this year are at the Huntington Hotel, Pasadena.

Following are the chairmen of the various arrangements committees:

Program Chairman: William Maddock, Los Angeles Gas and Electric Corp.
Entertainment: O. L. Moore, Los Angeles Gas and Electric Corp.
Transportation: O. F. Adkins, Los Angeles Gas and Electric Corp.
Banquet: George M. Sadler, Los Angeles Gas and Electric Corp.
Hotel Accommodations: Clyde H. Potter, Southern Counties Gas Co.
Reception and Attendance: W. M. Henderson, Los Angeles Gas and Electric Corp.
Golf: William Hoyt, H. R. Basford Company.
Publicity: Otto Mauthe, Los Angeles Gas and Electric Corp.
Registration: Wm. Fisher, Los Angeles Gas and Electric Corp.
San Diego Fair Trip: Ray Cavel, San Diego Consolidated Gas and Electric Co.
Hostess: Mrs. Wm. Moeller, Jr.

Wm. Moeller, Jr., president of the Association, has appointed a Nominating Committee to select a president, vice-president, treasurer and four directors for official nomination at the coming convention. Members of the committee are: James L. Stone, vice-president and general manager, Spokane Gas and Fuel Co., chairman; Geo. A. Campbell, president, Sierra Pacific Power Co.; F. A. Cressey, Jr., H. R. Basford Co.; E. P. Millikan, American Stove Co.; W. F. Raber, president, San Diego Consolidated Gas and Electric Co.

Pennsylvania Natural Gas Men's Association

ON June 24, the annual golf party and dinner meeting of Pennsylvania Natural Gas Men's Association was held at Pittsburgh Field Club near Pittsburgh.

At the annual meeting the present Board of Directors was re-elected for the ensuing year, namely: T. B. Gregory, vice-president, Columbia Gas and Electric Corporation, at Pittsburgh; G. W. Harr, manager, gas department, Monongahela West Penn Public Service Company, Fairmont, West Virginia; S. W. Meals, president, Carnegie Natural Gas Company, at Pittsburgh; H. H. Phillips, secretary, T. W. Phillips Gas & Oil Company, at Butler, Pa.; F. R. Phillips, president, Philadelphia Company, at Pittsburgh; G. W. Ratcliffe, president, Manufacturers Light & Heat Company, at Pittsburgh; J. F. Robinson, vice-president, Peoples Natural Gas Company, Pittsburgh, Pa.; F. F. Schauer, vice-president, Equitable Gas Company, Pittsburgh; J. B. Tonkin, president, Peoples Natural Gas Company, Pittsburgh; George E. Welker, president, United Natural Gas Company, Oil City, Pa.; and George Wittmer, Jr., vice-president, American Natural Gas Company, Pittsburgh, Pa.

The Board of Directors subsequently elected the following officers for the new Association year:

President—T. B. Gregory, vice-president, Columbia Gas and Electric Corporation, at Pittsburgh.

Vice-president—H. D. Freeland, president, Union National Bank of Waynesburg, Waynesburg, Pa.

Secretary-Treasurer—B. H. Smyers, Jr., attorney, of Pittsburgh.

Natural Gas Revenues Up in May

REVENUES of natural gas utilities aggregated $27,207,000 in May, an increase of 13.2 per cent from the figure of $24,031,600 reported for May, 1934. This was the result of a marked increase in consumption by domestic users. Sales of natural gas for cooking, heating, refrigeration, and other domestic purposes totalled 24,302,800,000 cu.ft. in May, an increase of 18.2 per cent over the figure reported for the same month in 1934.

The largest increases occurred in the Mid-continent area and on the Pacific Coast. In Kansas and Oklahoma, domestic sales of natural gas averaged 30 per cent higher in May, while in Texas the gain amounted to 25 per cent. Domestic sales of natural gas in California were also up 30 per cent for the month. This was doubtless the result in large part of

Convention Calendar

SEPTEMBER

17-19 Pacific Coast Gas Association
Hotel Huntington, Pasadena, Calif.

23-25 American Transit Association
Ambassador Hotel, Atlantic City, N. J.

Sept. 28-Oct. 1 The British Commercial Gas Association—24th Annual General Meeting and Conference
Edinburgh, Scotland

OCTOBER

14-17 American Gas Association
Palmer House, Chicago, Ill.

14-18 National Association of Railroad and Utilities Commissioners
Nashville, Tenn.

14-18 Twenty-Fourth Annual Safety Congress
Louisville, Ky.

NOVEMBER

11-14 American Petroleum Institute
Biltmore Hotel, Los Angeles, Calif.

the sub-normal temperatures which prevailed in these sections during the month, resulting in substantially increased uses of gas for incidental space heating purposes. Other sections of the country where the temperatures were more normal did not fare so well, the domestic use of natural gas in New York state continuing to run below the previous year, while in Pennsylvania the gain was moderate.

Revenues of companies distributing manufactured gas showed no appreciable gain during the month, the result of a continued decline in the use of manufactured gas by domestic customers. Manufactured gas sales for cooking, water heating, refrigeration, etc., amounted to 19,923,700,000 cu.ft. in May, a decline of 1.7 per cent from the figure reported for May, 1934. The decline was most pronounced in the New England States which showed a loss of 4 per cent in revenues from domestic uses. In Pennsylvania and New York the decline was more moderate, ranging from 2 to 3 per cent. Similar declines were experienced in Illinois, Indiana, and Michigan.

Four Receive McCarter Awards for Life Saving

H. Ackerman

AT a meeting of his staff on June 25, Conrad N. Lauer, president of The Philadelphia Gas Works Company, on behalf of the American Gas Association, presented McCarter medals and certificates to Harold Ackerman and Thomas C. Filer of the customers' service division, and to Charles J. McCready of the street division and a certificate of assistance to Harry N. Davis, also of the street division.

T. C. Filer

Vice-President Forstall in introducing the candidates mentioned the fact that thirty years ago the gas industry began the introduction of a course of training which would enable its employees to revive persons affected by gas and that such training has resulted in the saving of thousands of lives.

C. J. McReady

In making the presentations Mr. Lauer praised the recipients of the awards for successfully administering the Schafer method of resuscitation in a case involving three members of one family. He said that in as much as he had just recently witnessed a demonstration of the resuscitation methods by three of the company's "McCarter Medal Men" he was not only more cognizant than ever of the importance of this work, but that he was also greatly impressed by the enthusiasm and earnestness displayed by the men in administering the treatment.

H. N. Davis

Mr. Lauer extended congratulations to Messrs. Ackerman, Filer, McCready and Davis individually, and also to R. B. Inman, of the Casualty and Insurance Department, who has instructed the company's employees in the Schafer prone pressure method during the past twelve years.

In addition to Ervin Calhoun, H. S. Christman, V. W. Conover, P. T. Dashiell, J. B. Douglas, Walton Forstall, H. H. Hessler, T. S. Lever, Blackwell Newhall, E. A. Nicol and F. S. Whittaker, of Mr. Lauer's staff, the meeting was attended by T. V. Flynn, superintendent, street division, H. D. Lehman, superintendent, customers' service division and R. B. Inman, supervisor, safety division.

The above mentioned medals and certificates bring the McCarter awards received by Philadelphia Gas Works' employees to a total of twenty-seven.

Drafting Standards Adopted

A CODE of standard practice for drafting in the United States is contained in a pamphlet entitled "American Standard Drawings and Drafting Room Practice," which was recently released by The American Society of Mechanical Engineers and the Society for the Promotion of Engineering Education, sponsor organizations.

The standards listed, which were adopted by the American Standards Association in May, 1935, represent the work of a committee extending over a period of years. Walter L. MacIntosh, assistant engineer of the Consolidated Gas Company of New York, represented the American Gas Association on the committee, of which Franklin DeR. Furman was chairman.

Book Reviews

Geology of Natural Gas—Edited by Henry A. Ley. Published by the American Association of Petroleum Geologists, Tulsa, Okla., 1,200 Pages, 6 x 9 inches—250 Illustrations—$6.00.

This book is a symposium on the occurrence and geology of natural gas in North America. It contains thirty-eight papers contributed by forty-seven authors. The papers are based on competent professional interpretation of field data, each author having special field knowledge on which to base his contribution.

About one thousand pages of the book are concerned with systematic descriptions of various areas and the principal gas fields in them, including practically all, if not all, of the commercial gas fields of the continent. These contributions are well illustrated by maps and cross sections and supplemented by bibliographies so that the non-technical as well as the technical reader will find much information of interest.

The papers follow a uniform plan of presentation from which only minor deviations have been made by individual authors. The typical contribution includes Abstract, Introduction, History of Development, Geology (both stratigraphy and structure) Relation of Occurrence of Natural Gas to Geologic Conditions, and for each important field also detailed discussion of Geologic Conditions, Development, Well Depths and Costs, Pressures, Open Flow, Pipe Lines, Gas Production and Reserves, and Analyses of Gas.

Although the industry as a whole has long been familiar with the U. S. Bureau of Mines statistics showing that about two-thirds of the natural gas used in the United States is produced incidentally in the production of crude oil, it is improbable that the importance of natural gas fields in which crude oil production is of relatively little consequence has been fully appreciated. Of the fields discussed in "Geology of Natural Gas," only those in California, in southern Oklahoma and on the salt domes of the Gulf Coast are generally more important for their oil than for their gas production from the gas producing formation. The numerous important gas fields in which no oil has been found seem to prove that gas may accumulate from source materials or under other geologic conditions not suitable for accumulation of important commercial oil fields.

The later sections of the book on the "Valuation of Natural Gas Properties" and on "Natural Gas" are particularly timely and should be of great value to the reader desiring general information on these important subjects.

In its entirety "Geology of Natural Gas" serves admirably in its purpose of assembling a "Comprehensive Geologic Treatise of the Occurrence of Natural Gas in the North America Continent."

GAIL F. MOULTON.

ACCOUNTING SECTION

A. S. CORSON, Chairman H. W. HARTMAN, Secretary F. L. GRIFFITH, Vice-Chairman

Cooperation Between Inside and Outside Employees

By H. R. LIVINGSTON
Assistant Treasurer
Hope Natural Gas Co., Pittsburgh, Pa.

THE importance of cooperation between all employees, or between different departments of any organization cannot be over emphasized, and is usually, although not always, recognized. We do occasionally, but not often, find the department head who is more interested in a good showing for his own department than he is in cooperating with other departments for the good of his organization as a whole. However, even more important than this interdepartmental cooperation is that which is extended by and between the general office employees and those generally known as outside or field men.

It is easy, sometimes, to overlook, or at least underestimate, the importance of the work of the field men. Frequently this results from the natural tendency to concentrate our efforts upon the perfecting of the general office organization. Two points, however, should be noted: First, the important part that accurate records of the company's activities play in conducting the affairs of the gas industry, and second, the great influence reports originating in the field have upon the success of the business, for it is a truth generally recognized that the foundation of every successful enterprise is a knowledge of the business based upon facts and not upon suppositions.

Field Reports

In our own company, with district clerks located in field offices throughout one entire state and a portion of another state, whose responsibilities include the preparation of the large volume of reports necessary in a business such as the gas industry, the matter of cooperation between the two groups is considered of the utmost importance. These reports are basic for the company's entire accounting system, including as they do, the movement of all materials and equipment between the various districts, and the disposition of such materials in all phases of the work, including production, transmission and distribution systems.

The field men, of necessity, in many instances, represent the company in its transactions with the public. This is an indication that not only an intimate knowledge of their immediate problems is necessary, but they must be informed as to company policies and procedure. We have therefore made it a point to educate our field men in the matter of cooperation with the general office, and likewise, the general office employees with respect to the field. We have endeavored, as far as possible, to have the field man understand the routine and final disposition of all the reports submitted by him, on the theory that, having a knowledge of the ultimate purpose of the report and its part in the financial statements of the company, the preparation of field reports for the general office will be just so much more comprehensive, intelligent and accurate. It is true that not all such reports enter into the accounting records of the company, many of them being informative from an operating standpoint, but in these reports the need for care and accuracy is entirely as great, since, to the degree that such information is correct, the management is able to avoid decisions which might otherwise prove costly. This may be more clearly understood from the following illustrations:

Incomplete Reports Costly

(1) As a well is being drilled, the well "Log" is compiled showing the various sands encountered; weekly reports are forwarded to the general office showing the progress being made; reports are prepared covering movement of all material and tools to the well, and, upon completion, steel line measurement is run and the contractor paid for the total depth drilled as reported by this measurement. Rock pressure, volume and open flow tests are taken, a well record is prepared recording the amount of casing and tubing used and remaining in the well, all being forwarded to the general office; the well is shut in and production turned into the line, at which time we are supposed to have in the general office a complete history of the well with operating reports showing its production, and investment records of its actual cost.

Let us assume that the well was erroneously reported; that is, the production of the well as shown by the reports was greater than the actual production. This might result in additional non-productive wells being drilled or the acquisition of additional acreage of little or no value. The erroneous report thus becomes very costly to the company. Conversely, if the report submitted shows less than the actual production, the error might prove just as costly to the company in its possible surrender of valuable acreage or the non-development of it.

(2) In selecting a location for the drilling of a well, the management must be guided by the historical data of the wells already drilled in that vicinity, and upon such data furnished by the field is based the decision as to whether or not to drill at that location. As is well known, the cost of drilling varies according to the depth and conditions—such costs frequently amounting to $10,000 or more. Let us assume that a location has been selected and drilling begun, using the data at hand, when it is discovered that a dry hole had previously been drilled at the same location by another company. Thus the oversight of the field office in not reporting the previous drilling of a dry hole at this particular location caused useless expense to the company, and it is readily apparent that this expense might amount to a considerable sum.

These are not extreme cases but are entirely probable, when oversights of this nature occur in reports furnished to the general office. These illustrations apply, in particular, to the natural gas industry, but they can be matched in importance by corresponding examples in the manufactured gas industry, as well, though of a different nature.

Reciprocal Responsibilities

The responsibility for cooperation does not rest, however, entirely with the field man. We have endeavored to impress upon the general office employee that it is just as necessary for him to extend cooperation and a sympathetic understanding, because the manner in which he transacts such matters has much to do in creating the proper spirit among the field men, who, in many cases, do not have a daily, but rather a more infrequent contact with the general office, and thus judge the general office by the attitude of the employees with whom they come in contact. In this connection, many of the companies maintain their own private telephone and telegraph systems; in some instances these systems consist of several hundred miles of telephone and telegraph lines for the quick transmission of messages permitting

much of the business of the company to be carried on by telephone between the general office and the field. All utility men know the value of the friendly tone and manner in telephone conversations between employees and customers, and if the same courtesy be employed in the use of the telephone between the general office and the field, much progress will have been made toward establishing confidence and understanding between the two groups.

Providing Contacts

Complete cooperation between the general office and the field, therefore, is necessary and essential if best results are to be attained and cooperation can result only from intimacy of contact. How shall we attain this intimacy of contact? This, of course, depends to some extent upon the type of gas company under consideration. Where the entire plant and offices are centralized and within a limited area, it is possible and practical to acquaint the outside man with the routine of the general office by having him visit the offices periodically and learn the ultimate destination and purpose of his reports, and to enable the general office man to visit the plant periodically so that he may become familiar with the operations, equipment, materials and supplies, and thus more quickly comprehend the terms contained in the reports received from the field. Where, however, the plant or operating units are several hundred miles removed from the general office and where such units are scattered over a vast territory, in some instances comprising two or more states, the problem is somewhat more difficult. It can be accomplished, however, in the following manner:

First: By utilizing a traveling field representative who is required to spend several weeks in the general office about twice each year to keep informed on the routine and upon any changes or improved methods which may have been adopted, and devoting the remainder of his time in visiting the various field offices, acquainting them with the general office procedure, and also periodically checking and supervising the preparation of their reports, together with supervising the proper maintenance of the field office records.

Second: To arrange for the field man to visit the general office whenever occasion permits, switching other employees to relieve him of his regular duties, thus permitting him to spend some time in the general office work.

Third: To arrange for as many of the general office men as possible to visit at least one of the field offices periodically for a few weeks so as to secure a more intimate knowledge of their problems.

Fourth: By holding occasional district meetings in the field, attended by the field men in that particular district and one or more representatives from the general office, for the purpose of reviewing and discussing the forms and reports in use, their purpose and routine. Such meetings frequently correct the erroneous impression of a field man that a certain report has no particular value, because from a distance he is unable to see the use to which it is put, and thus may have become somewhat indifferent in its preparation.

Fifth: The development of employee benefit plans in recent years also has contributed greatly to the possibility of establishing contacts between the inside and outside employees by providing the medium of general meetings attended by both groups of employees, in which they meet for the consideration and discussion of matters of mutual interest and benefit. Such circumstances furnish a splendid opportunity for the two groups to become better acquainted and to foster that mutual understanding so essential to the production of best results.

Sixth: Social or sport activities such as an annual picnic, or a bowling league, often bring these two groups together in an association that provides opportunity for becoming better acquainted under different circumstances than the regular business meeting.

Cooperation is an essential factor in the success of every business, and is desirable between all employees and between all departments, but probably, in no instance, is it more necessary than between the general office and the field.

If You're Outside—You're Out of Luck

AT least as far as the Accounting Section Luncheon Conferences are concerned. And YOU will want to be in on all that goes on. There will be plenty of good argument—and, after all, that is the only road to sound conclusions.

The keynote is that these are your meetings where your problems are discussed. You simply can't afford to miss them.

There is something for everybody—and here are the four groups which hold luncheon conferences simultaneously:

Office Management
Customers' Accounting
General Accounting
Customers' Relations

Under this arrangement every activity of interest to members of the Accounting Section will be covered. Simply select the conference at which topics of interest to you will be discussed. A member of the Accounting Section whose background and knowledge are all that is required will preside at the various conferences. Just consider one conference for a minute—Office Management—at which any office management problem will be eligible for discussion. Come prepared to take your hair down and get right into the thick of it. Remember, all of the discussion will be "off the record." The following are a few of the topics which may be discussed:

1. The use of office employees in selling gas and gas appliances.
2. Personality and intelligence versus technical skill in judging employees for promotion to supervisory positions.
3. Stationary standardization.
4. Centralized stenographic, computing and filing departments.
5. Completely mechanized stores accounting procedures.

The place and time of each of the four luncheon conferences will be conspicuously announced in the "A. G. A. Monthly" and at the Convention. Be sure to watch for these announcements.

Admission is by ticket only. You must purchase your ticket before 10 o'clock on the day of the luncheon. Tickets may be purchased at the Registration Desk, or at the Accounting Section meeting room.

This year you cannot afford to miss these Luncheon Conferences.

P. S.—Remember how good they were last year?

J. T. Sutliff Transferred

JAMES T. SUTLIFF, who for many years was located at the factory in Connersville, Ind., is now associated with the Chicago office of the Roots-Connersville Blower Corp. at 20 North Wacker Drive. Mr. Sutliff will specialize on the sales of Type "T" turbine pumps and Victor-Acme blowers.

COMMERCIAL SECTION

F. M. ROSENKRANS, Chairman J. W. WEST, Jr., Secretary C. E. BENNETT, Vice-Chairman

N. Y.-N. E. Sales Conference Has Record Attendance

R. L. Fletcher

UNDER the leadership of Chairman R. L. Fletcher, of the Providence Gas Company, the joint New York-New England Sales Conference, sponsored by the American Gas Association and the New England Gas Association, concluded a highly successful three-day meeting, June 29, at The Griswold Hotel, New London, Connecticut.

More than 225 sales representatives, 25 per cent greater than the previous year, were present to discuss ways and means of increasing the gas companies' load. All of the New England states, New York, New Jersey, Pennsylvania, and other sections sent delegates. It is estimated that the companies represented at the meeting have more than six million meters, or about 40 per cent of the total in the United States.

Progress Predicted

In his opening remarks, Mr. Fletcher, who is also second vice-president of the New England Gas Association, described sales methods and industry conditions of a decade ago, contrasting them with present-day achievements. Sales conferences were cited as a major factor in the progress made. Mr. Fletcher predicted that promotional rates will become universal; contract charges for servicing; greater efficiency in appliances; rapid growth in refrigeration and water heating load; thousands of house heating installations where hundreds now exist; a rebirth of gas for flood lighting; higher prices for oil; and optimism and progress despite many current problems.

Fundamentals of the competitive position of gas fuel were ably presented by A. M. Beebee, of the Rochester Gas and Electric Corporation, in his paper, "Economics of the Gas Industry." Mr. Beebee has made a careful study of this subject and his conclusions are definitely favorable to gas in competition with other fuels. His views, as expressed in several recent papers, have received widespread comment.

"Every Employee a Business Builder" was the subject of a paper at the first session by Austin Monty of The Philadelphia Electric Co., which started considerable discussion. Mr. Monty urged a program involving education of employees, sale of load-building appliances to employees and mass selling to the public. The first session concluded with a thorough analysis of credit problems and long term sales by H. L. Dalbeck of the New England Gas and Electric Association, Cambridge, Mass.

Starting with a discussion of "Commercial Cooking Developments" by T. J. Gallagher, chairman of the A.G.A. Hotel and Restaurant Committee, and ending with a symposium on water heating, the next two days of the conference were devoted to discussions of specific sales problems by many able speakers. Some of the subjects covered were kitchen heating, house heating and winter air conditioning, dealer cooperation, market research, retail appliance sales, wholesale refrigeration, maintenance contacts, summer air conditioning, and increasing floor traffic.

All papers presented at the conference have been printed in full in the July issue of NEW ENGLAND GAS NEWS.

All-Gas Kitchens in Housing Project

RECENTLY James A. Moffett, federal housing administrator, officially broke ground for the first million-dollar low-cost housing project to be erected in Washington, D. C., under Title 2 of the National Housing Act. Located just across the Potomac river from Washington on Wilson Boulevard, the development, known as Colonial Village, will be comprised of forty-five two-story brick buildings, which, together with garages, driveways, and landscaped courts, will cover and area of more than eleven acres.

The group will consist of three types of apartments, each with a corner location and cross ventilation. The smallest will consist of a living room, bedroom, kitchenette and bath. In the next size, another bedroom will be available, and the largest unit will also include a dinette. In all, there will be constructed a total of 276 individual apartment units and 76 garages, which will cost approximately $1,130,000. Proposed rentals are reported as ranging from $37.50 to $62.50 per month.

The Rosslyn Gas Company, an affiliate of the Washington Gas Light Company, will receive the contract for modernizing each kitchen with complete gas equipment. The equipment to be supplied consists of 276 insulated gas ranges and 276 gas refrigerators. Both ranges and refrigerators will be finished in two-tone ivory and green, which will match the built-in kitchen cabinets and other fixtures.

In this connection it may be noted that all of the kitchen equipment is to be built and installed as a unit, with range, cabinet, sink, and refrigerator side by side without an inch of wasted space.

The first units are expected to be ready for occupancy on or about September 1, 1935.

British Study A. G. A. Testing Program

RECOMMENDATIONS that the gas industry in Great Britain initiate a research and standardization program have led to the formation of the Gas Industry Committee of the British Standards Institution under the leadership of The Institution of Gas Engineers. This development has come about through the general recognition by British industry that Great Britain is exceptional among the larger gas-producing countries of the world in having no official and recognized system of test for ensuring the safety and efficiency of gas appliances.

It has been suggested that this program be organized with a wider scope than simply testing of appliances. An organization to cooperate on all problems having to do with the use of gas is planned. Four divisions have been proposed for such an organization, covering research, industrial, domestic, and illuminating problems, which would facilitate the distribution of technical information regarding domestic gas appliances and related problems.

In connection with the development of this program, the British gas industry has carefully studied programs which the American Gas Association has been carrying on in the United States for several years, and also programs that have been in operation in Europe.

One feature of the American program to which close attention is being given in Great Britain is the possibility of development of a "proving house," so-called, functioning somewhat after the manner of the testing laboratory of the American Gas Association at Cleveland, Ohio. A proposal in Great Britain in connection with the contemplated proving house, for granting the use of a label indicating that an appliance has been tested and approved, is under consideration by the gas and gas appliance industries.—American Standards Association, July, 1935.

HOME SERVICE COMMITTEE

MARGARET NEVINS, Chairman JESSIE McQUEEN, Secretary

Home Service Aids to Sales Promotion

Margaret Nevins

By MARGARET NEVINS

The Syracuse Lighting Co., Inc.
Syracuse, N. Y.

THE ways in which a home service department can aid sales promotion are practically unlimited. Nationally, month by month, we are watching the scope of activities widening.

In reviewing the evolution of sales promotion practices during the past few years, we see the continual adoption of new methods to reach an ever changing market. Paralleling this procedure has come an equivalent one in home service aids to sales promotion.

Most of us recall, in the inception of home service departments the functions were limited almost entirely to complaint calls arising from customers using new domestic gas appliances, in the use of which they could not be trained from mother to daughter, as in past generations. From there the trend was toward assisting in training salesmen and then broadened out into visual demonstrations of equipment when the necessity and the value was realized; until today, we have its unlimited field of possibilities in sales promotion.

What are some of the many aids open to sales promotion?

Large Group Appliance Demonstrations

These involve an audience of customers from 100 up. It is conceded that the results are not always immediate. Neither are they from similar mass publicity in newspaper advertisements into which thousands of dollars are placed yearly. In newspaper publicity we hope to reach a volume of people and entice them into purchasing an appliance whose service must be covered in a few lines of type. Similarly, in large group demonstrations by home service personnel, we wish to reach a large volume of people but here we have the customer's presence and attention for from 1 to 2 hours, at a minimum cost, for a personal and visual demonstration of our appliance. There can be little question of the sales promotion value provided the presentation is on a sound constructive selling basis. The presentation must be prepared and executed with the same finesse as a newspaper advertisement. With the sales promotion manager, the sales points to be covered can be planned, then subtly reach the customer through the visual demonstration.

As a specific example of the volume of contacts, I point out the results in our own company for 1934. The analysis shows that in Syracuse at our large group demonstrations we had an attendance of 58,000 customers covering 8,000 different customers for 5 hours each. What an opportunity this afforded for the promotion of sales!

To more forcefully point out the possibilities of large group demonstrations as an aid to sales, I will tell you about one developed recently for our smaller gas communities. It is on the surface the old story of a gas range demonstration, but with a difference. The plan is not new but a more stimulating and appealing approach was used. The plan is to hold "Three Days of Cooking Miracles," two afternoons and one evening meeting. The evening meeting is "husband's night."

The week preceding the school a home service representative personally canvassed all customers in the community giving each a "pep" story on the school and leaving with her a hand bill designating the place, date and hours of the meetings. On the hand bills instructions were printed for preparing a tempting cake. This was done so that the customer would place a value on the announcement and not carelessly discard it.

During the first two days of the school it was announced that every woman who brought her husband to the evening meeting would receive a rubber spatula spoon—a gadget that they all wanted—and that the men were going to do all the cooking. This called for their skepticism and laughs, but also interest and curiosity.

At the evening meeting, out of a town of 400, we had 147 present 41 of whom were men. As planned, the men prepared and cooked all the food. They made pie, cake, cream puffs, biscuits, broiler dinners, oven meals, etc. You can well imagine the hilarity during the demonstration and, in a small community, the assistance in banter they received from the audience. It was as good or better than any high priced comedy you ever attended—yet it did our sales promotion job for us. We used the men in the community to do the selling. The editor of the local newspaper made the pie and in the following issue of the paper there was a front page three-fourth column article on "Husband's Night" including a very substantial boost for our appliances and product.

The recipes for the dishes prepared during the demonstrations were not given out at the time. We used this medium for calling personally on the customers afterwards to deliver them, and through this work up our prospect list. One of the outstanding points in the follow-up work was that not once did a customer indicate that the cost of gas was too much.

Aids to Sales Promotion in Home Calls

Home calls are the field for prospects. Whether a home service representative is making a follow-up home call after the installation of a new appliance, or a complaint call, or a survey call, she is in the customer's home to render a service. She has this wedge by which to gain the customer's confidence and can make use of it to determine for what appliance the customer is a prospect. In addition, she can feel the customer out as to what is delaying her purchase, as well as how soon the customer will be a prospect. She can, in addition, do the preliminary selling.

In my own company, we used the home call approach starting the first of May for five weeks on our minimum bill customers. Our objective was to sell them refrigerators. We used five girls who called on 3,500 customers during this 5-week period. Needless to say, we learned a great deal which will be the basis for future sales promotion activities among this class of customers. Since there is so much agitation and discussion on building up these minimum bill customers, you may be interested in knowing our experience in this sales promotion activity.

The usual method of selling refrigerators was used. It was apparent after the first two weeks that we were not gaining much headway. By this time, we began to feel that the usual method of selling refrigerators just would not work. I asked for permission to make a survey for 3 weeks in 30 of these customers' homes to see what we could learn about their living standards. We gained the consent of the necessary 30 customers and agreed to pay them $2.00 if, each day, for 3 weeks they would permit one of our home service girls to call at her home. The customer was to give the girl, on the chart provided her, a list of the foods purchased each day, the amount, the price and where purchased. One of the principal motives for making these daily calls, in addition to learning their food habits, was to become familiar

Paper before N. Y.-N. E. Regional Sales Conference, New London, Conn., June 28.

with their living conditions. Was a daily newspaper taken; did the customer read the ads; did she notice the special day prices on foods and take advantage of them? If she used ice, how much and how often. We wanted to learn the income of the families and the ways in which they spent it. We obtained this, and much additional information. It confirmed our realization that with the present price of refrigerators, and the incomes of these customers, there just was not a market.

A few high lights on our participation in this sales promotion activity follow. The figures I will give will be based on an average per 1,000 customers:

Fifty per cent were not at home when calls were made, or refused to answer the door, or listen to the girl who approached them. One-fourth were dependent on some member of their family for support, or were old people between the ages of 60 and 85 with barely enough income for subsistence. This left 375. One-fifth were able to procure only the bare necessities of life. Twenty-five had severe illness of the wage earner of the family and were not able to take on any additional expense. Twenty-five owned refrigerators. Another 25 never used ice and purchased their food from meal to meal; as one woman expressed it "my man he bring home two pork chop—we eat two pork chop." Twenty-five had just purchased cheap ice boxes ranging in price from $15.00 to $25.00. This left 175 customers out of the original 1000. Thirty of these were dead, 35 had moved, 20 had gone on welfare. This left 90 of the original 1000 as "hopefuls."

You may have the impression that there are average size families consisting of 4 among this class of customers. We found that only about one-fifth of these customers had more than 2 or 3 in the family.

The survey made in the homes of 30 of these minimum bill customers can be visualized through the information we obtained during the survey. I will outline a few typical cases:

One family had 3—two adults and 1 child. They purchased no meat during the summer months because the husband went fishing and used this in place of meat. The average cost of their food per week for 3 weeks was $4.31. Of this, $1.29 was invested in perishables. They were paying $3.50 a month on a radio. The woman told us that they were just eating the cheapest things they could get so they could have the radio. They used ice on only the very hottest days of the summer but did not have it delivered. The husband carried the ice home; thereby saving 10 cents on 50 lbs.

Another family had 3—2 adults and 1 child. They purchased only 3 pints of milk per week. They took the daily paper. The customer told us she read the advertisements but she couldn't be bothered going down town to such markets in order to save a few cents on her purchases. We found in many cases that the food purchases were made at a corner grocery store where credit could be obtained. The husband had work only intermittently. Their average cost of food per week for 3 weeks was $7.93, of which $2.42 was spent on perishables.

In a third case there were 4 in the family—2 adults and 2 children. The average food cost per week for 3 weeks was $6.69, of which $2.62 was spent on perishables. They had a great many doctor bills. The customer said that if she had money with which to buy anything additional it would be better food.

I think you can see from this that it was rather a hopeless proposition to justify an expenditure of approximately $4.50 a month to cover the monthly payments and cost of operation for a refrigerator in this class of customers.

The information that I have just given you on this work is very sketchy but the detailed report is to be made the basis for our future sales promotional work among this class of customers.

Other Aids to Sales Promotion

New appliances and changes in construction of old appliances are constantly reaching our market. Here home service can aid the sales promotion department by providing selling points on them. These supplied monthly to the sales manager add to the sales information available for salesmen and for a fund of up-to-date information for new salesmen. Contacting dealers and dealer salesmen to instruct them in the uses and sales features of appliances is part of a needed promotional activity. A way that our company has used is to contact our larger dealers and department store buyers, invite them and their sales force to a dinner meeting. The dinner is held in one of the leading restaurants of the city. After the dinner the group visits the company building and there are given an hour-and-a-half demonstration on the particular appliances we wish to promote, especially emphasizing during these demonstrations the current sales slants.

I have covered but a few phases of the many in which home service can aid sales promotion work but I think as you consider the ideas presented today you will find, as I mentioned in the beginning, that the aids to sales promotion by home service are practically unlimited.

Modernization Credit Extended

PRESIDENT ROOSEVELT, on May 28, signed an amendment to the National Housing Act which permits the extension of modernization credit in amounts up to $50,000 to improve business structures of all types—hotels, apartment houses, multiple family dwellings, hospitals, orphanages, colleges, schools, factories and industrial plants. The term of operation of Title I of the Act was extended to April 1, 1936. Gas companies and appliance manufacturers are taking advantage of this added opportunity to sell improved gas equipment under the modernization program.

Home Service at the Convention

THE Home Service Breakfast will again be the high spot of home service activities at the A. G. A. Convention in Chicago in October. This breakfast, which each year grows in popularity for attendance as well as the number of industry executives present, will be on Wednesday morning, October 16. F. M. Rosenkrans, chairman of the Commercial Section will address the group, followed by a series of short talks on home service activities by home service directors.

On the afternoon previous to the Home Service Breakfast,—at 4:00 o'clock, following the Commercial Section program, there will be a home service subject matter program of general interest to home service people. Full particulars will be announced shortly by Margaret Nevins, chairman of the A. G. A. Home Service Committee.

New London Home Service Meeting

A VARIETY of home service activities were discussed informally at the home service program in connection with the New York-New England Regional Gas Sales Conference, under the Chairmanship of Margaret Fossett of the Boston Consolidated Gas Company. Among those contributing were: Mrs. Jean Haas, Kings County Lighting Company, Brooklyn, who discussed outside women's group meetings; Frances McBeath of the Consolidated Gas Co. of New York, who spoke on sales floor demonstrations; Mrs. Lyda Flanders of the Worcester Gas Light Company who gave a gas equipment talk; and Ruth Soule of The Brooklyn Union Gas Company, Brooklyn, whose subject was "Odds and Ends."

Recent trends in nutrition were capably discussed by Marian Evans Dakin, extension nutritionist of Connecticut State College.

A luncheon for the group was followed by home service talks as they particularly applied to sales. "Home Service Records as Signposts to Sales" was the subject developed by Elizabeth Sweeney of the Empire Gas & Electric Company in Geneva, N. Y., Margaret Nevins of The Syracuse Lighting Company, Inc., presented "Home Service in Sales Promotion."

The group was then treated to two interesting skits. An Electrolux beauty skit was presented by Jane Tiffany Wagner, of the Electrolux Division of Servel Inc., and Frances McBeath of the Consolidated Gas Co., of New York. The skit which won first prize in the Home Service Skit Contest, "Just One Home Service Day" was directed by Ruth Soule of The Brooklyn Union Gas Company and the parts were taken by a number of the home service directors present. Assistance in the properties was given by Grace Mumm of the Connecticut Power Company of New London, whose small niece also took part in the skit.

INDUSTRIAL GAS SECTION

J. F. QUINN, Chairman C. W. BERGHORN, Secretary C. W. GALE, Vice-Chairman

Industrial Men Consider Commercial Gas Load at Boston Meeting

H. A. Sutton

THE immediate necessity for market analyses and surveys to maintain and increase the commercial gas load proved to be the keynote of the first Commercial Gas Sales Symposium held under the auspices of the General Commercial Committee of the Industrial Gas Section of the American Gas Association at Boston, Mass., June 26, 1935. Among the engineers in attendance were representatives from Detroit, Toronto, Knoxville, New York, Philadelphia, Brooklyn, Syracuse, Chicago, Newark, Boston and other New England cities.

The meeting disclosed a recent and astonishingly acute interest in the almost forgotten commercial gas sales field. Discussion brought out that while this is one of the most profitable loads on the gas utility lines, it has been the most neglected. Only in the past two years has any real interest been shown and this has uncovered a surprising and valuable array of facts.

Manufacturers Listed

The need for a list of manufacturers of different kinds of commercial gas appliances in various commercial fields was stressed. Such a list has just been compiled and will be mailed shortly.

The meeting was opened by H. A. Sutton of the Public Service Electric and Gas Co., chairman of the General Commercial Gas Sales Committee, and the delegates were welcomed by F. D. Cadwallader of the Boston Consolidated Gas Co. The first paper on "The Commercial Gas Load: What It Is and What It Means to the Gas Company," by F. R. Trembly, Jr., of The Philadelphia Gas Works Co. proved to be of outstanding interest. Mr. Trembly said in part:

"The commercial load consists of two parts, hotel and miscellaneous, otherwise described as the known and the unknown, the secure and the insecure. The hotel and restaurant load, thanks to strong utility support and a proper sales philosophy, may be considered in most cases secure against competitors. The miscellaneous commercial load was developed through convenience without utility cooperation. There is no general understanding of this gas load as to its development or protection. The days of safe indifference are gone. The utilities must either take the same interest and activity in this field as they have in the hotel and restaurant field or be prepared to lose a considerable portion of this gas load."

Air Conditioning Load

"Most of the customers in the commercial field are relatively small users, consuming on an average of 5 to 35 M cu.ft. per month," said Roy E. Wright of the New England Gas & Electric Company in his paper "The Market—The Sales Policy." "Their gas bills are based on the higher rate blocks and therefore provide an attractive and profitable business." After breaking down the market into a long list of widely varying users, he went on to say, "there are three other uses for gas that can be applied to practically every type customer in the above group, namely, summer air conditioning, gas lighting and space heating. The gas utilities should assist in developing the summer air conditioning gas load as any delay in pioneering this field would serve to secure it for the electric industry. We can well afford to follow the lead of the electric companies who are doing a fine job in building up this load. It will cost money to get started and develop this field and specially trained men are required. A sales engineer assigned to this task cannot be expected to pay his way for at least a year or two. As to gas lighting there are indications of a comeback but this is to date confined to flood lighting of commercial esablishments."

The dwindling of the gas load among tailor shops was combatted in Mr. Wright's territory by servicing the boilers and a saving of 25 per cent on fuel consumption was effected.

"Analysis of tailor shops" concluded Mr. Wright, "has convinced us of the following facts:

"1. That it is not wholly a question of rates. Equitable rates should be filed, but we cannot hope to have rates low enough to meet competitive fuels on a cost basis.

"2. Very few tailors are making any money. There are too many tailors for all to make a profitable living. The small tailors have been severely affected by the reduced prices forced by the larger chain organizations.

"3. Much good can be done by helping the tailor reduce his gas bill by increasing the operating efficiency of his gas equipment.

"4. The average tailor does not like to use oil and is willing to pay a little more for gas.

"5. Periodic contact will do much to retain this gas load."

An able analysis of the advertising possibilities and probabilities in the commercial field was presented by C. E. Lucke, Consolidated Gas Co., New York, in a paper "Advertising: What Is Being Done." Much of the lost load of the gas utilities could have been saved by direct mail broadsides and newspaper advertising, he stated. There is an immediate need for a national advertising schedule in the trade magazines to combat the vicious and determined campaign our competitors are staging. Fantastic and misleading statements by the electric interests are backed up by favorable editorial comment on the part of editors disgruntled by lack of support from the gas companies.

Direct Mail Advertising

"The A.G.A. National Advertising Campaign" was the name of a paper read by J. P. Leinroth, Public Service Company of New Jersey. He announced that the committee of which he is chairman (Advertising Promotion Committee, Industrial Gas Section) has prepared in all its details, a direct-by-mail campaign to cover the field under discussion. Because of the vast number of classifications it is confined to the following five:

1. Hotels, restaurants, hospitals, clubs, etc.
2. Delicatessens and bake shops.
3. Tailor shops and pressing establishments.
4. Barber and beauty shops.
5. Counter food dispensing as in drug stores, etc.

Three mailing pieces already prepared on each of these classifications were shown.

A pamphlet, "Commercial Heat," was presented by Fenton Kelsey as a medium for reaching commercial gas users. For its use Mr. Kelsey has developed the "formula of the common denomination, plus intelligent, local appeal, administered in such a way, from the standpoint of economies, that it can be persistent and consistent."

The afternoon session started with a paper "Cooperation With Manufacturers and Sales Agencies Handling Commercial Equipment" by W. W. Young, of the Connecticut Light & Power Co. He stated that there was "nothing new in the matter of cooperation in equipment design by the gas industry. Almost every gas company, at

one time or another, has aided in the design of equipment. The American Gas Association has done valuable work in design, both in fundamental research program and in its testing laboratories. We must realize, however, that the type of equipment under discussion probably needs more design aid from our industry than any other class." While rate reductions are a factor, he thought, that, in general, for that class of business, the money might better be spent for personnel. "That more might be done if we, instead of making a 10 per cent rate reduction, took 10 per cent of our gross revenue on that business and put it into personnel. The one point that I should like to stress is that the gas company should be interested in seeing that the equipment is properly installed and operating satisfactorily. The manufacturer is not always in a position to do this. Poorly installed equipment is an easy prey for our competitors."

Beauty Parlor Load

As for the load from the beauty parlors, during the past few years, manufacturers of gas system hair dryers have furnished the gas companies with roughly 100,000,000 cu.ft. per month, based on the installation of about 15,000 system dryers, of an average of five helmets or hoods each. This information was vouchsafed by W. V. Sullivan, of Halliwell, Inc. in his paper "The Manufacturers Viewpoint." He went on to say that this load accrued to the gas companies with very little effort on their part, because the manufacturers undertook all of the pioneering and educational work in conjunction with the beauty shop equipment jobbers and dealers. The fact that there are approximately 75,000 beauty parlors in this country shows that this is still a fertile field for the gas utilities.

All of the men in the industrial division of The Brooklyn Union Gas Co. were switched temporarily into the commercial field because of the decline in gas sales according to R. H. Staniford, speaking on the "Development of Modern Equipment and New and Additional Uses for Gas in the Commercial Field." "Covering those customers which represented the largest numbers as to class and the largest customer in sold gas, some 900 have already been contacted." There appears to be a growing tendency to use oil for space heating and small steam boilers probably due to a desire on the customer's part to economize.

The survey brought to light many heretofore unknown possibilities which can be developed into lucrative business if the right appliances can be found or designed.

Trying to hold the customers already obtained, trying to keep them happily satisfied and make them feel happily satisfied has been, the past four years, the creed and work of C. E. Muehlberg, of the Consolidated Gas Company of New York who spoke on the "Service and Maintenance of Gas Equipment in the Commercial Field." "The servicing and maintenance of gas appliances by the gas company," according to Mr. Muehlberg, "is vitally necessary in order to retain the old business and gain new customers because we are in a highly competitive field. Coal and oil companies are rendering this service in connection with their fuels. This increases the value of their fuels and has a tendency to decrease the intangible values of gas which we have always stressed when selling our fuel."

In closing the meeting Chairman Joseph E. Quinn, of the Brooklyn Union Gas Co., said, "I believe that a cornerstone has been laid today in this Commercial Gas Sales Symposium."

"This morning, Mr. Leinroth covered the subject of a direct-mail campaign. Let me tell you that the committee worked hard to get this campaign in shape, and I do hope that you will support it. I hope next year the gas industry will be more receptive to national advertising."

Gas Industry Takes Part in National Plumbers Convention

Gas exhibit at Plumbers' Convention.

THE gas industry's exhibit at the 53rd annual convention of the National Association of Master Plumbers held at the Stevens Hotel in Chicago from June 23 to June 27 was in a position to benefit from the enthusiasm of the record breaking attendance of master plumbers from all over the United States. The registered delegates numbered 2,750 and public interest in the show drew 40,000 people to view the exhibit.

The exhibit sponsored by the American Gas Association and The Peoples Gas Light and Coke Company of Chicago covered all phases of gas service as it applies to the plumbing and heating trade, and received much favorable comment on its completeness and on the graphic way it presented the gas story.

The exhibit was manned by salesmen from the new business department of The Peoples Gas Light and Coke Company, and was installed by the display department of the gas company, under the supervision of D. W. Chapman, chairman of the Display and Contact Committee.

Of interest to the gas industry is the comment made in the speech of John J. Calnan, president of the Association, concerning the American Gas Association. Speaking of relations between the Association and public utilities, Mr. Calnan remarked that the subject had been discussed

R. J. Barrett, director, and John J. Calnan, president, National Association of Master Plumbers, shown at the gas industry's exhibit.

with the American Gas Association, and concluded "the American Gas Association promises their cooperation. I think they can be depended upon to give it."

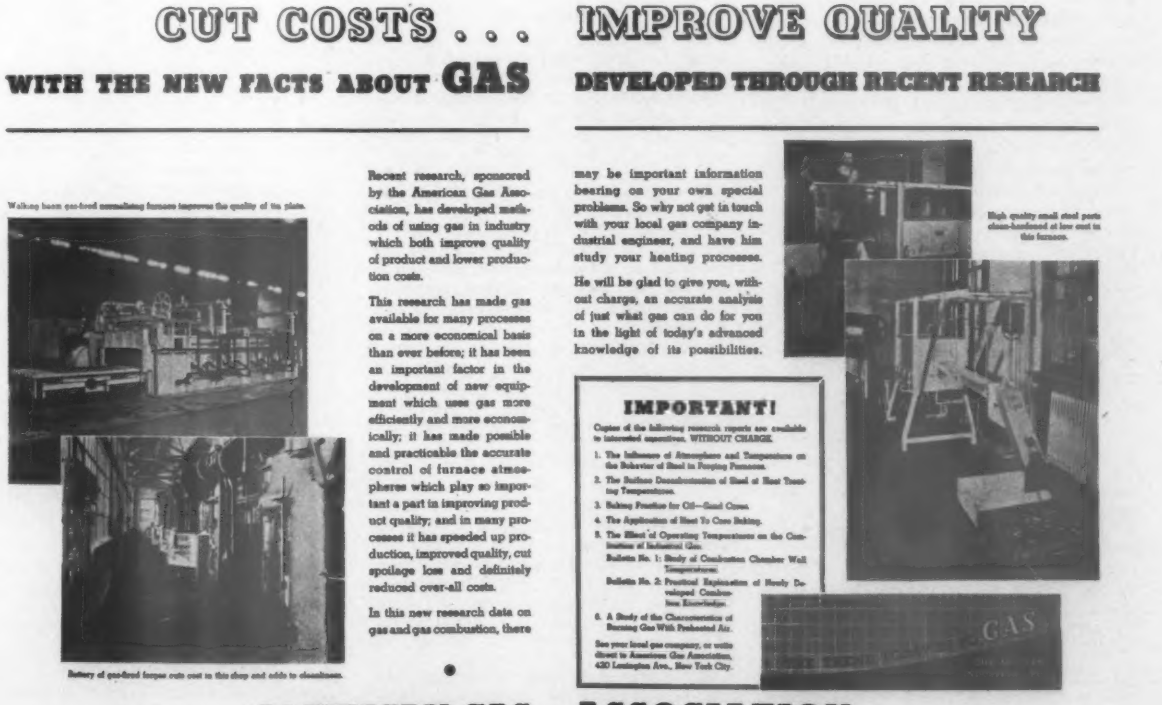
In addition to the exhibit sponsored by the American Gas Association and the Peoples Company, the gas industries were well represented in exhibits of the Ruud Water Heater Company, the American Gas Products Corporation, the Crane Company with its gas heater and gas water heater, and other manufacturers.

Industrial Gas Advertisements for September

IT'S TIME TO REAPPRAISE YOUR BAKING OPERATIONS!
NEW GAS RESEARCH FINDS WAY TO BETTER QUALITY AT LOWER COST
Important developments in the use of gas for baking during recent years make it advisable for bakers everywhere to reappraise their baking problems to make certain that they are taking advantage of every opportunity that gas affords to improve quality and cut costs.
For the most up-to-date information on the use of gas in baking, get in touch with your local gas company industrial engineer. He will be glad to survey your plant and to show you how and to what extent economies may be effected, either by installing new gas equipment or by redesigning and modernizing your present equipment. Call him today.
Notice!
GAS
AMERICAN GAS ASSOCIATION
INDUSTRIAL GAS SECTION . . . 420 LEXINGTON AVE., N. Y. C.

Left—Reproduction of full-page advertisement which will appear in Bakers Weekly, *September 7, and* Bakers Helper, *September 21*

Below — Reproduction of double-page advertisement which will appear in Iron Age, *September 5 and* Steel, *September 23*


CUT COSTS . . .
WITH THE NEW FACTS ABOUT GAS
Walking beam gas-fired normalizing furnace improves the quality of tin plate.
Battery of gas-fired forges cuts cost in this shop and adds to cleanliness.
Recent research, sponsored by the American Gas Association, has developed methods of using gas in industry which both improve quality of product and lower production costs.
This research has made gas available for many processes on a more economical basis than ever before; it has been an important factor in the development of new equipment which uses gas more efficiently and more economically; it has made possible and practicable the accurate control of furnace atmospheres which play so important a part in improving product quality; and in many processes it has speeded up production, improved quality, cut spoilage loss and definitely reduced over-all costs.
In this new research data on gas and gas combustion, there
IMPROVE QUALITY
DEVELOPED THROUGH RECENT RESEARCH
may be important information bearing on your own special problems. So why not get in touch with your local gas company industrial engineer, and have him study your heating processes.
He will be glad to give you, without charge, an accurate analysis of just what gas can do for you in the light of today's advanced knowledge of its possibilities.
High quality small steel parts clean-hardened at low cost in this furnace.
IMPORTANT!
Copies of the following research reports are available to interested executives, WITHOUT CHARGE.
1. The Influence of Atmosphere and Temperature on the Behavior of Steel in Forging Furnaces.
2. The Surface Decarburization of Steel at Heat Treating Temperatures.
3. Baking Practice for Oil—Gas Ovens.
4. The Application of Heat To Core Baking.
5. The Effect of Operating Temperatures on the Combustion of Industrial Gas.
Bulletin No. 1: Study of Combustion Chamber Wall Temperatures.
Bulletin No. 2: Practical Explanation of Newly Developed Combustion Knowledge.
6. A Study of the Characteristics of Burning Gas With Preheated Air.
See your local gas company, or write direct to American Gas Association, 420 Lexington Ave., New York City.
GAS
AMERICAN GAS ASSOCIATION
INDUSTRIAL GAS SECTION · 420 LEXINGTON AVE., NEW YORK CITY
VISIT THE INDUSTRIAL GAS EXHIBIT AT THE NATIONAL METAL EXPOSITION

TESTING LABORATORY

R. M. CONNER, Director Managing Committee: J. S. DeHART, Jr., Chairman N. T. SELLMAN, Secretary

Safety Pilot Clauses of Boiler and Furnace Requirements Revised for Immediate Application

IMPORTANT revisions of those clauses of the American Standard Approval Requirements for Central Heating Gas Appliances which concern automatic devices to prevent escape of unburned gas were made by the Subcommittee on Approval Requirements for Central Heating Gas Appliances at its May 24, 1935, meeting. Subsequently these changes were approved by a special letter ballot of the Association's Approval Requirements Committee to become effective immediately. Hence, revised and considerably more practicable test procedures and stipulations are now applied to all thermostatic pilots (or other automatic devices to prevent escape of unburned gas) installed upon gas boilers or warm air furnaces submitted to the American Gas Association Testing Laboratories.

As was pointed out at the May 24 session, the latest printed standards require that automatic devices to prevent escape of unburned gas which are supplied on central heating gas appliances, be capable of complying with the American Standard Listing Requirements for such accessories *when tested on the appliance*. The listing standards, however, specify that the test for closing time on such accessories be conducted with the devices in a chamber maintained at 75 degrees Fahrenheit. Obviously, an accessory supplied as a part of a boiler or furnace cannot be tested *in the appliance* and still in a chamber maintained at 75° F. To circumvent this inconsistency the following specific clauses were those adopted for immediate application. They replace Parts I and III, Sec. 5 and Parts II and IV, Sec. 10 of the American Standard Approval Requirements for Central Heating Gas Appliances (Z21.13-1934):

Parts I and III

SEC. 7. AUTOMATIC DEVICES TO PREVENT ESCAPE OF UNBURNED GAS (Formerly Sec. 5)

a. (Revised) Every automatically or remotely controlled boiler shall be equipped with an automatic device which will prevent the escape of unburned gas from the main burner or burners.

b. (Added) These devices supplied on gas boilers shall comply with the applicable construction requirements specified in the American Standard Listing Requirements for Automatic Devices Designed To Prevent Escape of Unburned Gas, Z21.20-1935, or the latest revision thereof approved by the American Standards Association.

Parts II and IV

SEC. 11. AUTOMATIC DEVICES TO PREVENT ESCAPE OF UNBURNED GAS (Formerly Sec. 10, revised)

a. (Added) The time required for an automatic device to assume the position required of it in service for turning on the gas supply shall not exceed 10 minutes when the device is operated in accordance with the manufacturer's instructions, except that for those devices requiring a manual operation to assume the "on" position, in which cases the time required shall not exceed 2 minutes.

b. (Added) The time required for an automatic device to assume the position required of it in service for closing off the gas supply shall not exceed 5 minutes.

Method of Test

The gas rate to the boiler shall be adjusted at normal pressure on Gas B to within plus or minus 2 per cent of the manufacturer's hourly B.t.u. input rating. The manifold pressure shall be approximately that recommended by the manufacturer. The boiler shall be operated for a period of 30 minutes. All gas and water shall then be shut off and the time for the device to operate noted.

c. (Added) For devices, the time of operation of which can be varied by means of an adjustment, the adjustment shall be the same throughout the tests for compliance with both clauses "a" and "b" above.

d.† (Added) Where the device incorporates a pilot burner as an integral part of its construction, the pilot flames shall travel freely to all ports on the pilot burner when the gas is ignited at any one point.

Method of Test

The gas rate to the pilot shall be adjusted at normal gas pressure on Gases A and B to the manufacturer's hourly B.t.u. input rating for the pilot, and the gas ignited. The gas pressure shall then be reduced to a point at which only sufficient gas is being consumed to cause the device to assume the position required of it in service for turning on the gas supply.

The flames shall then be extinguished and the gas from the ports which serve to heat the thermal element of the device immediately re-ignited. The flames shall travel freely to all other ports on the pilot burner.

e. (Added) Devices with which a gas valve is assembled as a unit shall not leak gas when the valve is in the open position with the outlet capped.

Method of Test

The inlet of the device shall be connected to a leakage proof system,* the pressure in which is measured by a water manometer. The outlet of the device shall then be sealed with the valve in the open position assumed as a result of normal operation. Air shall be admitted to the system until a pressure of 13.6 inches equivalent water column is reached, when it shall be shut off.

There shall be no drop in the water column during the first minute after the air supply is shut off.

f. (Added) The pressure loss in a closed system* to which is connected the thermostatic device having its valve in the closed position resulting from normal operation, shall not exceed, during one minute, the value determined by the following formula, when air under a pressure of 13.6 inches water column is initially applied to the system:

$$H_t = \frac{0.00193\ P_a}{V}$$

Where:

H_t = maximum permissible pressure loss (inches water column)

P_a = barometric pressure (inches water columns), and

V = volumetric capacity of reservoir and piping in system, not less than 2.5 cubic feet.

Method of Test

With the valve in the closed position as a result of normal operation, the inlet of the device shall be connected to a leakage proof system, the pressure in which is measured by a water manometer. Air shall be admitted to the system until a pressure of 13.6 inches equivalent water column is reached, when it shall be shut off. The drop in water column during the first minute after the air supply is shut off, shall not exceed that determined by the above formula.

Other and rather extensive revisions of the central heating gas appliance requirements were also proposed by the subcommittee at the May 24 meeting, but these will be submitted to the industry for comment and criticism in the regular manner and further debated be-

† This test shall be applied only to those pilot burners in which separate ports are used for heating the thermal element of the device and for ignition of gas at main burners.

* This system shall comprise the accessory under test, necessary piping, pressure gage, and reservoir having a volumetric capacity of at least 2.5 cu.ft.

fore final adoption. It was necessary that the clauses here quoted be placed in effect without delay in order that the Laboratories might test the type of equipment affected without dubious interpretations of the intent of requirements. All manufacturers of central heating gas appliances have been notified by mail of the revisions here discussed.

Standards for Gas Pressure Regulators Revised

AS the result of action taken by the Committee on Listing Requirements for Domestic Gas Appliance Pressure Regulators at its May 2, 1935, meeting in Cleveland, several changes in the printed American Standards (221.18) for such accessories which become effective January 1, 1936, were approved for *immediate application.*

The chief revision involved the addition of a performance clause placing limits on regulator operating characteristics at very low throughputs. The new requirement specifies that outlet pressure shall not increase more than one inch with a constant 10.5-inch inlet pressure when regulator throughput is decreased from that at which the device was adjusted for test to 10 per cent of that amount. The net result is to insure reasonable regulator performance at unusually low inputs to appliances such as might result with one or more of the burners turned off. It was recognized that this practice of operating appliances with certain burners shut off is common during seasons of mild weather.

Other modifications made in the regulator standards include: (1) the elimination of certain test procedures demonstrated by experience to be superfluous, (2) the re-phrasing of several test instructions in the interest of greater clarity, and (3) the specification of more complete identification of listed models by means of markings on the device in order to facilitate identification of the accessory in respect to Laboratory listings and to permit procurement of proper replacement devices and repair parts after the regulator has been installed.

Relief Valves Submitted for Testing

ADDED impetus was given to the new appliance accessory certification program of the Testing Laboratories in May and June by the submittal for test of over twenty-five pressure, temperature, or vacuum relief valves for use on water heaters. When these units are brought to the point of compliance they will be the first such accessories to be listed in the Association's Directory of Approved Gas Appliances and Listed Accessories in accordance with the American Standard Listing Requirements for Relief and Automatic Gas Shut-Off Valves for Use on Water Heating Systems. Regulators, conversion burners, and burner valves are the only varieties of accessories now listed in that Directory.

It is noteworthy that, although the requirements upon the basis of which listing may be granted, were approved as American Standard as recently as February 11, and will not become formally effective until January 1 of next year, the 25 valves represent some 8 different and well-known manufacturers. Such wide interest is attributed to the fact that on and after January 1, 1936, all approved storage water heaters will be required to carry acceptable means to prevent excessive water temperatures and pressures.

Each of the 25 valves tested was first found deficient in some small particular. However, corrections may be easily made by each manufacturer and full compliance thereby attained. This illustrates once again the beneficial influence upon appliance and accessory design wrought in this country by the Laboratories' program.

New Standards Developed for Hair Dryers

SUDDENLY and surely has hair drying by gas grown to major proportions. The favor the newly developed equipment is gaining in barber's and beautician's shops is enabling utilities to increase commercial loads and appliance manufacturers to extend lines of products. American Gas Association approval of gas operated hair drying appliances is being demanded as a result. The Approval Requirements Committee has just completed the organization of a subcommittee to formulate suitable standards and the Laboratory at Cleveland has concluded extensive research culminating in a suggested set of requirements. It is expected that the Laboratory Seal of Approval will, in the near future, be as widely apparent on gas hair dryers as on other types of domestic gas appliances.

Natural Gas Pioneer Dies

JOHN M. GARARD, of Columbus, Ohio, one of the real pioneers of the American natural gas and oil industries, and one of the best known and sincerely loved figures in these industries, died recently at the age of 83.

Mr. Garard was vice-president and general manager of the Ohio Fuel Supply Company and the Columbus Gas and Fuel Company up to the time of his retirement in 1925, when these companies were taken over by the Columbia Gas and Electric Company.

He was born on a farm near Garard's Fort, Greene County, Pennsylvania, April 25, 1852.

Mr. Garard was successful in an operation which resulted in the organization of the Ohio Fuel Supply Company. Other companies were acquired and it was not long until Ohio Fuel was recognized as one of the leading gas companies in the business. With the late George W. and Fred Crawford, he had a large share in building up the extensive network of properties, known as the Crawford interests and now part of the Columbia Gas and Electric system.

He was active in gas association work, being a member of the American Gas Association at the time of his death. In 1912 he served as president of the Natural Gas Association of America and took an active part in the affairs of that association up to the time of its merger with the American Gas Association. He also served as president of the Ohio Gas and Oil Men's Association.

DEALER RELATIONS

(Continued from page 285)

them under conditions and on terms which are fair to the public and which assure a reasonable return to efficient dealers on the investment they employ";
(and) "the primary function of dealers is to select and sell appliances to the public";
(and) "appliance distribution is to their" (gas company and dealer) "common advantage, notwithstanding the inherent differences in their primary functions";
(Therefore) "the New England Gas Association adopts the following Principles, etc. . . . ."

This considered view of the N. E. G. A. points to a significant distinction between two types of cooperating outlets.

First, in the words of the preamble, those outlets whose function is to select and sell appliances to the public. This is the type of dealers who buy from trade sources the appliances they sell; who stock, display and demonstrate them, and select the lines they sell; also, who do their own servicing and collecting. The appliance department of a department store and the specialty appliance dealer typify outlets of this type. Such firms are dealers in the true sense of the word. We shall refer to them as "Type A Dealers."
The definition distinguishes by implication, the second type, namely, those outlets which sell the gas company's line of appliances exclusively or almost to the exclusion of other lines. The only thing the second type of outlets does is to turn up the lead or close the order. All other steps are performed by the gas company: the appliance is displayed, warehoused, supplied, and serviced by the company; the latter carries the time payment paper and collections are made by its staff. Many of these so-called dealers have neither store nor shop; they work out from their homes. Actually, they are commission men, company agents. We shall call them "Type B Agents."

If we were to survey the dealer-cooperation activities of individual companies in the industry, we should find various degrees of participation which range from no cooperation to its fullest expression where the load building activity itself revolves around dealer outlets. Were we to analyze the plans pursued by those companies which earnestly strive for dealer cooperation, we should find two schools of thought, which parallel the Type A dealer and the Type B agent.

One of these schools of thought believes they should concentrate their efforts on Type A dealers, namely, real merchandisers who select their own lines and perform the whole merchandising operation themselves. This school regards as worthy of its major interest only the small number of firms that are self-sustaining appliance dealers in the true sense of the term and those who can be built up to become such dealers. This cooperative policy has much to commend it, including that it encourages active representation in the community of the leading lines. Furthermore, it avoids domination of the local appliance field by the brands that the gas company sells.

Contrasting Schools of Thought

Gas companies which belong to this school believe that their dealer cooperation should be expressed on these lines:

—Make certain that the conditions which surround their selling of appliances enable dealers to receive suitable and adequate compensation for the service they render as dealers;

—Encourage dealers to use the advanced forms of merchandising technique with reference to display, advertising, selling, etc., that have proved effective in moving appliances.

The other school among gas companies believes that their cooperative energies should be directed chiefly to enlisting large numbers of Type B agents, the second type, who sell the gas company's appliance line. Dealers of various kinds and shades, from the hole-in-the-wall plumber to the leading department store, are encouraged to become its agents. Advantages of this policy are these. Numerous agents makes possible effective penetration of some sections of the local market which the company's sales force does not ordinarily reach. More agents means more coverage and valuable missionary work is made possible. These factors are important today because appliances are largely sold to homes of moderate and lower incomes.

Drawbacks are these. Some commissions paid to such "scaler" agents are not earned: the agent has done little, and claims full compensation. This tends to spread dissension among the company's salesmen and to inspire controversies between dealers over who is entitled to the commission. The company's salesman regards as unfair the dealer's small contribution of effort compared with his own. He views the dealer as little more than an order taker who "grabs off" the fruits of his patient missionary efforts with the customer.

This form of cooperative organization, which relies largely on Type B agents, is the outgrowth of early attempts to interest plumbers and others in a friendly relationship with the gas company. It is an expression of expedient measures which were chosen to translate trade opposition into a more friendly attitude.

Somewhere between the two types of cooperative organization is to be found the present working plan of many companies. Almost every company began its cooperative activities by encouraging the development of Class B agents. Almost every company today is striving towards the type of cooperative organization that concentrates on building Class A dealers, self-sustaining merchandisers, and looks forward to the day when its cooperative plan will be of that pattern. Forward thinking companies would like to attack the residential market shoulder to shoulder with a dozen or a score of high-grade, fast-stepping gas appliance merchants who would sell with the same vigor and resourcefulness that they employ. A few companies have attained that ideal as the result of much hard work and patient effort.

Specialty Selling Discouraged

It is probable that conditions in the trade at this time promise only small results for a plan which aims at cooperating only with dealers who are real merchandisers or who can be stimulated to employ specialty selling methods (the Class A type). Companies which project their dealer cooperation on these lines today are likely to be discouraged by the thin response to proposals which are very sound and logical. The reasons are not far to seek. Too few dealers have a knowledge of specialty selling; too few dealers think as well of gas appliances as they do of their more popular electric counterparts; too few dealers are aware that the public will buy good gas equipment; too few leading gas appliance manufacturers take a real interest in stimulating dealer cooperation—the entire burden of cre-

ating dealer interest is thrown on the gas company.

The decision to direct the gas company's cooperative effort to real merchandisers is an aim that should be constantly kept in view and striven for. Considering the needs of the immediate future, it appears that this long-term aim might advantageously be combined with an approach that promises near-term results. This approach, although somewhat expedient in nature, might be less sound, less logical, than the long-term objective, but it would be something that "takes hold" now. As progress becomes apparent, undesirable features would be withdrawn. Opinion regarding details of method will differ, but there can be little divergence in viewpoint regarding the following needs of the moment.

In conclusion, a few recommendations to companies, which are desirous of strengthening their cooperative relations with dealers, may be in order:

1. That the Merchandising Principles of the A. G. A. and those of the New England Gas Association be studied and made the basis of the Company's policy. The latter are cited because they outline procedure in greater detail.
2. That every selling plan the company has in preparation be resolved under these principles, in spirit as well as to the letter.
3. That prior to announcement of the sales plan to the public, the plan be submitted to the dealers for review so they may have an actual opportunity to advance suggestions for its improvement and to point out features which they believe conflict with fair trade practice.
4. That methods which the company has found to be resultful in obtaining appliance business in volume be made known freely to dealers so they may be induced to adopt these ideas as an aid to becoming more successful.
5. While the company may continue to employ the idea of cooperating through agents who sell its appliances, that this method be retained only in individual cases where retention is necessary in order to arouse the agent's ambition to become a dealer in the true sense.

J. Chester Grey Dies

J. Chester Grey

J. CHESTER GREY, former president of the Atlantic City Gas Company, died recently at his home in Ventnor, N. J.

Mr. Grey came to Atlantic City in October, 1925, as manager of the gas company, succeeding the late Carlton Geist. He was elected president July 1, 1930. Previously Mr. Grey had been associated with the manufacture, sale and distribution of gas in every department for over 15 years. His last connection before coming to Atlantic City was with the Lansing Fuel and Gas Company at Lansing, Mich.

He was past president of the Lansing Rotary Club, Michigan Gas Association, and New Jersey Gas Association.

Born in Verona, Wis., July 1, 1880, the son of James and Elizabeth Grey, he attended the University of Wisconsin, graduating as a mechanical engineer in 1902.

Mr. Grey went to work for the Clarion Steel Company, a subsidiary of the United States Steel Company, at Clarion, Pa., in August, 1902, and remained until December, 1903. He then entered the gas business as cadet engineer of the Des Moines Gas Company, a subsidiary of the U. G. I. of Philadelphia, and saw service in various plants of that corporation, including Savannah, Ga., Omaha, Neb., and Fort Wayne, Ind.

In the Spring of 1920, Mr. Grey went to Lansing, Mich., as manager of the C. H. Geist Company and from there he went to Atlantic City.

NEW AIR CONDITIONING UNIT

(Continued from page 294)

evaporated off in an air stream in the small auxiliary regenerator tower. Gas is turned on only when the liquid needs regeneration and the consumption of gas is proportional to the amount of water being removed from the air being conditioned.

In the small unit shown in the illustration the air stream used for regeneration is bled off the main circulating stream. This makes possible a very simple unit which has but three moving parts: a standard motor, a standard pump and a standard fan. An advantage of redrawing air for regeneration from the main stream is that by so doing a regular supply of fresh air is automatically drawn into the air conditioned space. The larger unit has a separate fan for the regenerator circuit.

It is characteristic of Kathene solutions that they will dry air down to a certain relative humidity fixed by the strength of the solution. If air of a lower relative humidity than corresponds to the strength of the solution used is passed through the unit, the unit will humidify the air automatically up to the appropriate relative humidity. If air of a relative humidity greater than that which corresponds to the solution used is passed through the unit, the unit will be humidified down to a fixed relative humidity. This inherent property of the solution allows for very accurate control of relative humidity and makes the system of particular usefulness in all applications where close relative humidity control is desired, the unit acting both as a humidifier and a dehumidifier, automatically and without additional equipment. The standard line is designed particularly for industrial applications, but can be used with equal satisfaction for domestic and other comfort applications in conjunction with water coils or with supplementary refrigeration.

Because of the high thermal efficiency of the unit, it is possible to use the system in all classes of air conditioning or industrial drying problems, particularly those where the drying must be done at low temperature. Direct dehydration has the advantage of uniform operating conditions and improved quality of the conditional air with an actual saving in operating cost over that of electric refrigeration.

Standard units are now available in four sizes: 500, 1,000, 2,000, and 4,000 cu.ft. of air per minute. Special sizes can be engineered to meet unusual air conditioning problems.

Housing Loans Reach New High

MORE than two hundred million dollars of private capital for the modernization and repair of all types of buildings, for construction of new homes, and refinancing of existing mortgages has been released through insured loans under operation of the National Housing Act since last Fall, it was announced July 15 by Stewart McDonald, acting federal housing administrator. Low cost housing operations under the Act have developed a total of $14,287,148.

Recent Visitors to A. G. A. Headquarters

F. M. Banks, Southern California Gas Co., Los Angeles, Calif.

Merrill E. Skinner, Niagara Hudson Power Corp., Buffalo, N. Y.

E. C. Adams, Adams Bros. Mfg. Co. Inc., Pittsburgh, Pa.

H. N. Ramsey, Welsbach Co., Gloucester City, N. J.

A. S. Corson, The United Gas Improvement Co., Philadelphia, Pa.

Dr. Thomas, Berlin, Germany (managing director, Prussian Light & Power Corp.)

Clark Belden, New England Gas Assn., Boston, Mass.

Dorsey R. Smith, Consolidated Gas Elec. Lt. & Power Co., Baltimore, Md.

V. William Conover, The Philadelphia Gas Works Co., Philadelphia, Pa.

R. B. Hurt, Hardwick Stove Co., Cleveland, Tenn.

Merrill N. Davis, S. R. Dresser Mfg. Co., Bradford, Pa.

Miss Naomi Remey, Porto Rico Gas & Coke Co., San Juan, Porto Rico

Personnel Service

SERVICES OFFERED

Working Foreman, for water gas plant, send-out about 100,000. 13 years' experience making gas, able to make general repairs and welding; familiar with high and low-pressure. Was foreman of plant 5 years with 150,000 send-out. South preferred. **955.**

Sales Engin[illegible] with established contacts and a New England office seeks exclusive representation with some manufacturer of financial standing who wishes to establish his line in the East. Background includes both gas and electric utility sales as well as managerial experience plus an excellent record with manufacturers. **956.**

Would like to hear from a company that is seeking a man of experience and personality to develop **house heating** industrial and commercial sales. If you have a virgin territory, one that requires personal contact to build good will and increase sales, communicate for further particulars. **957.**

Gas Appliance Sales Engineer now employed with one of largest manufacturers; 6 years' research and development and sales engineering cooking appliances. Thoroughly familiar all combustion and testing problems. Interested sales engineering with manufacturer or utilization department with utility; (35) Married. College graduate. **958.**

Sales Representative—experience selling utilities and dealers for reputable gas range manufacturers for past 10 years, majority time metropolitan area; have also traveled Eastern states, desires to make connection as sales manager or representative for reputable manufacturer. Has good personality and is well educated. American (37). **961.**

Manufacturers Representative, with exceptional experience and connections among architects, builders, plumbing supply jobbers, plumbers and gas companies, desires a medium or low priced line of gas ranges for the metropolitan New York City area. Calling on this trade for sixteen years selling gas equipment and specialities. **962.**

Experienced **Engineer-Manager** has held practically every position, with emphasis on engineering and operation phases, covering design, construction and operation every type water gas plant, operation verticals, coke ovens, by-product recovery, including natural gas distribution. Useful at headquarters or on property; specialist Washington plan rate basing and making. **963.**

Sales—New Business—commercial manager: Thorough training, outstanding successful record initiating, directing advertising, publicity, merchandising campaigns; supervising industrial gas and power sales; developing costs, rates, selling prices; handling public relations, public ownership agitation, rate reduction demands, and appearing before commissions, boards, etc., on various matters; expert negotiator. **965.**

Salesman with 18 years' gas company experience, 8 years' selling all types of gas appliances, domestic, hotel and house heating, desires position, will go anywhere, own car. (39) Married. **966.**

Sales **Supervisor** or **Sales Engineer.** Have had considerable experience in industrial, commercial, house heating and domestic sales work. Also am familiar with design and installation of equipment. Have worked with manufactured and natural gases. University graduate and married. **967.**

Public Relations; advertising, publicity, complaints, public contacts, editing of employees' magazine, photography, six years. Industrial development and research; all details including surveys of various cities, towns and counties. Compilation and editing of data, marketing surveys, economic studies, four years. Merchandising; systematizing and coordination. **968.**

Manager-Executive—18 years' practical operating experience in all phases manufactured gas industry. Technical; university training. Particular emphasis and success in merchandise sales, load building, public relations; desires connection with straight gas utility in general or sales management capacity. Go anywhere; (40) married. **969.**

SERVICES OFFERED

Engineer—Nine years in gas industry. Now employed as manager of small property. Desires position as Assistant Engineer of large property or **industrial gas** sales work with appliance manufacturer. **970.**

Ambitious advertiser, 31, seeks position where initiative coupled with varied experience in industrial and public utility fields may command recognition. Knowledge **accounting,** statistics, business administration, security sales work and record keeping, form drafting, freehand drawing, addressograph, mailing and inventory. **971.**

Mechanical Engineer; thorough research and production experience in all phases of manufactured gas distribution. Knows modern meter work (tin and iron) from treating leather to improving fast meter records; elimination of gum, etc. troubles; customer contact; languages, desires responsible position in distribution or with manufacturer; U. S. or foreign (31), married. **972.**

Graduate **Chemical Engineer** desires position with operating or holding company, where six years' experience manufacturing coal and water gas, two years' experience operating meter repair shop and complaint department, and one year with house heating sales and engineering experience, can be of material assistance in lowering costs, or providing better service. **973.**

New Business Manager; extensive training, sales promotion, publicity, public relations, supervising salesmen, commercial and domestic, outstanding record as gas engineer, both natural and manufactured experience. Can give best of references. **974.**

Engineer, thoroughly experienced in appliance problems with manufactured and natural gas, desires position with manufacturer or gas company. Record includes ten years' research work in laboratories of national scope, five years' development of domestic appliances and controls; also sales. **975.**

Executive, with many years' experience in the gas industry; graduate in Mechanical Engineering with practical experience in gas plant design, plant construction and maintenance. Thorough knowledge of operating, new business relations, industrial fuel and house heating applications and sales. Take charge of management of company or new business department. **976.**

Distribution Superintendent—**Gas Engineer.** B.S. and M.S. degrees, major in Gas Engineering. Four years' "dirt" experience high- and low-pressure distribution operation; two years' distribution superintendent of industrial territory (23,000 meters) including meter repair, appliance department. Completed Alexander Hamilton modern business course. Capable industrial or distribution engineer. (30). **977.**

Gas Engineer (37). Early technical training chemical engineering, nine years' chemical research gas analyses, fuels and gasoline adsorption. Eight years' active in gas engineering in charge of plant construction, inventory and appraisal valuations specializing in depreciation studies and public service commission contacts. Energetic. Married. **978.**

Engineer with utility accounting experience. B.S., M.E.E.; postgraduate work. Three years' research assistant, National Industrial Conference Board. Twelve years' gas and electric utility experience, rates, franchises, cost allocations, contracts, research in utility management problems. Experience with P.S.C. accounting. (N.Y.). **979.**

Controls and **gas burner engineer** wants position offering greater possibilities. Has several years' practical work in design, application and operation thermostatic and gas mixing controls or mechanical and electrical types, and gas burners all types. Fundamental training and experience, combustion, metallurgy, mechanics and electricity; experienced production supervision. **980.**

Sales Engineer having specialized in the sales and promotion of automatic gas water heaters for over 10 years. Planned and conducted many successful sales campaigns. Well acquainted with gas companies, plumbing supply houses and have arranged many eastern plumber dealer setups. **981.**

SERVICES OFFERED

Specialist in problems pertaining to efficiency, operation and maintenance; well grounded in the fundamentals of fuel production, transmission and distribution. Have proven record for load building, new business and fuel application. Experience also covers appraisal, rates, selling and public relations; graduate engineer. **982.**

Accounting, Cost and **General.** Eight years' experience; gas plant, transmission and distribution system construction and operations analyzed. Ascertainment of cost, accounting of same determined in conformity with utility and public service commissions requirements. Field records gas works and main systems audited and accounting and statistical reports compiled. **983.**

Assistant Superintendent of coal gas plant desires position with a coke oven or coal gas plant in supervisory capacity. Three and one-half years university training in civil engineering; eight and one-half years' experience in coal gas plant. Familiar with plant construction work. (29) Married. **984.**

Presently employed. Available thirty days. Do you need a gas man who can get results? I am willing to prove it by a year's trial. Experienced thirteen years in gas business **sales promotion,** making friends, boosting sales, creating company good will; can help sales force get new business. **985.**

Manager. 20 years' experience managing water gas properties. 5 years' experience managing natural gas property. Experience includes all phases including distribution, new business and public relations. **986.**

POSITIONS OPEN

Leading water heater manufacturer requires **salesmen** to call on Utilities. Must have previous experience. Good Territories open. Drawing account against commission. Replies held confidential. **0294.**

Foremost manufacturer of all types of gas fired space heaters desires **representatives** in several territories, representing other and non-competing gas appliances. Acquaintance with gas companies important. **0295.**

THE C. C. R. IN ACTION

The Personnel Department of an important member-company recently advised A. G. A. Personnel Service it was in the market for certain specified qualifications and experience. A number of Confidential Classification Records were selected, descriptive of men who appeared to comply with the specifications, and submitted for consideration. The following appreciative letter completes the story:

June 21, 1935

We are returning herewith the records which you furnished us in connection with our positions in the———Department. I am pleased to report that we have employed one of——— graduates, Mr.———. We consider him an exceptionally promising young man.

We greatly appreciate your furnishing us with the records and should we have any further need for such employees we shall communicate with you again.

Another large organization requested special and somewhat unusual sales-executive requirements; Personnel Service wrote:

July 2, 1935

*"*** send list of men and descriptive material among which you may find some possibilities *** remind you preliminary inquiries can be handled through this office until such time as you shall prepare the "short list" *** among personnel have met, or papers indicate, should come close to personal qualifications, outside of professional requirements are Messrs.———."*

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